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COLCHICINE USE IN 6000 PATIENTS WITH DISK DISEASE & OTHER RELATED RESISTANTLY-PAINFUL SPINAL DISORDERS

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"In a community that boasts of the unreal,
I met this miracle healer out of the Old Testament,
Who not only revived my faith in the profession of medicine,
But impressed me by the fact that many people must be better
Physically & Spiritually by having been in his presence.
Indeed, I found an uncommon friend who has the respect
& admiration of the old coach.

Earl Red Blaik
Army
July 4th, 1978"

Inscription that Coach Red Blaik wrote for me when he
Gave me his Autobiography "The Red Blaik Story" in 1978.

SINCE MY SERENDIPITOUS DISCOVERY THAT COLCHICINE HEALS PATIENTS WITH DISK DISEASE, I have now had success in treating over 6000 patients. Of these 6000 people, nearly 1500 had had previously unsuccessful spinal surgeries (or other spinal procedures) done on them by other treating doctors. All of these patients came to me from many parts of our globe to seek a final end to their painful miseries. In this communication, I shall try to summarise the findings of these 6000 patients whom I have successfully treated with Colchicine over the past few decades of my quite lucky discovery. In addition, I shall outline a Colchicine Treatment Protocol & bring you up-to-date on some other new findings concerning the use of Colchicine in resistantly-painful spinal disorders.

INTRODUCTION

Over the past 3 decades of my discovery that Colchicine is therapeutic for disk disease (& for other related resistantly-painful spinal disorders),¹⁻⁵ I have come to realise that there is something truly specific about Colchicine that brings about healing of these resistantly-painful spinal disorders. Also, I have come to know that Colchicine is an extremely safe medication (-especially when used as I will outline below). To show Colchicine's safety, for example, Colchicine is used to treat patients who have severe cirrhosis of the liver (in the end-stages of their lives) -to bring about healing of their damaged livers. Colchicine has been proven to extend the lives of these liver-damaged patients.¹⁹⁻²¹

Herniated disk disease of the human spine is, for the most part, a benign, self-limiting painful disorder for which surgery (& other drastic invasive procedures such as chemonucleolysis) probably are not the treatments of choice. Anyway, it seems clear to me at this time, after having treated so many unsuccessful spinal surgery patients (done by other surgeons -from all over the world & mainly from here in the USA) -that surgery of human disks should never be done for pain alone.

Because of this marvelous safety of Colchicine & also because Colchicine is man's most powerful anti-inflammatory medication, before one entertains any thoughts of invasive procedures (diagnostic or otherwise) on human spines, intravenous & oral Colchicine should be used before delving into those more formidable & more risky alternatives.



Fig. 1: Colchicum Autumnale (Meadow Saffron or Autumn Crocus). This is the Autumn Crocus (Meadow Saffron) plant from which Colchicine is extracted (from the corms). The alkaloid Colchicine was isolated from Colchicum in 1820 by Pelletier & Caventou.

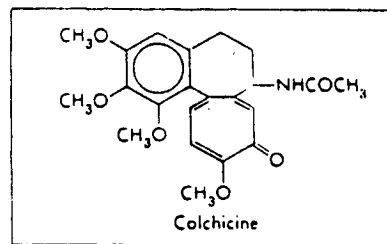


Fig. 2: Chemical structure of Colchicine. The molecular formula for Colchicine is C₂₂H₂₅N-O₆. Its molecular weight is 399.48. Synonyms for Colchicine are: Colchineseo, Colchisol, Colcin, Colsaloid & Condylon.

Mechanism of Colchicine's action in disk disorders. Colchicine is man's most powerful anti-inflammatory & his oldest medication. Alexander of Tralles is said to have given his soldiers Colchicine to enhance their health & their fighting abilities in those centuries before Jesus Christ was born. Colchicine seems to act directly on diskal inflammation & the ancient miraculous medicine also tends to "deinflame" spinal nerve roots (see Table 1).

Table 1. Actions of Colchicine in Disk Disease.

1. De-inflames the spinal nerve root(s).
2. De-inflames the disk.
3. Inhibits WBC chemotaxis.
4. Washes out painful crystalline deposits:
 - a. Uric acid.
 - b. Calcium pyrophosphate dihydrate (CPPD).
5. Increases endorphin-producing neurons.⁶
6. Combats the atopic element of the disk syndrome.
7. Shrinks the disk (see Fig. 3).
8. Inhibits amyloid deposits in the disk.



Figs. 3A & 3B: Spinal Lumbosacral Disk CT Scan Before & After Colchicine Treatment. This shows the disk-shrinking ability of Colchicine.⁷ These CT scans were made 3 months apart (11-4-81 & 2-8-82): Following intravenous & oral Colchicine therapy, there was complete resolution of the patient's ruptured disk syndrome of severe back & leg pain, muscle spasm, along with return of limb sensation & return of the patient's previously absent left ankle jerk deep tendon reflex. Note in the lower picture the lumbar disk has already shrunken somewhat & the left S1 spinal nerve root has returned to normal configuration (arrow).⁷

(*"Mechanism of Colchicine Action in Disk Disease", Continued:*)

Prof. Herman J. Weinreb of New York City has found Colchicine to be extremely effective in the treatment of Multiple Sclerosis. Prof. Weinreb believes that Colchicine's main activity in humans takes place at the cellular micro-tubular level.²⁹

Colchicine's effectiveness in disk disease can be immediate in the patient with severe diskal back pain and sciatica, as it miraculously works in the markedly painful patient who has acute severe gouty arthritis. Other times the patient may have suffered most intense unrelievable back and limb pains over a long period of time, and this patient will sometimes permanently respond to only one intravenous injection of Colchicine. Equally as unpredictable is the patient who may come to you with resistant severe back pain and sciatica of very short duration & who might require many weeks or months of regular intravenous Colchicine therapy to gain relief from his (or her) back discomfort.

I never give up on treating a patient unless there is utterly no response to Colchicine whatsoever, or if the patient is too sensitive to Colchicine therapy. Generally speaking, it is important to see some response to one's Colchicine therapy in order to continue it for any length of time. I have never seen a patient get worse from Colchicine therapy in the many thousands & thousands of patients whom I have treated over the past nearly 4 decades. Rarely a patient may not improve, but that is the exception, not the rule. Never are the patients worse after Colchicine therapy. As is quite well-known, treatments, such as spinal surgery or chemonucleolysis, are unable to make such a claim of therapeutic innocuity.

Colchicine Proven Effective in Disk Disease. Colchicine has been proven effective in disk disease in Profs. Meek, Enrick & Giudice's FDA-Approved Double-Blind Study (FDA IND Number 21,807).⁸ In that study, 2 equal groups of patients with severe disk disease were treated, one group with intravenous Colchicine, & the other with placebo (intravenous saline). The chi-square test showed the effectiveness of Colchicine to be significant at the 99.0 percent level of confidence (with the risk of error at 0.01).⁸ All four parameters of that study (pain, muscle spasm, positive leg-stretching & muscle weakness) showed a markedly good response to Colchicine with little, if any, result to the non-Colchicine intravenous (see Fig. 4).

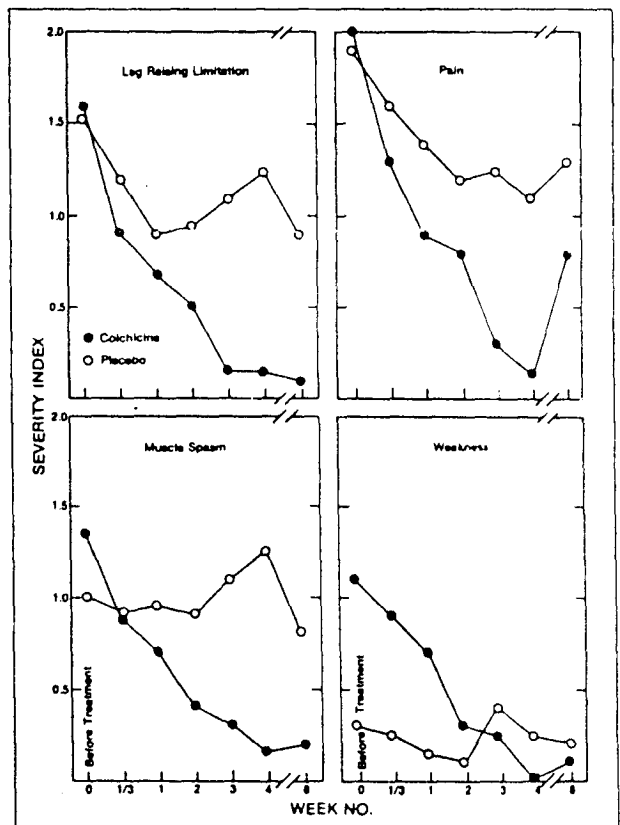


Fig. 4: Four Parameters of Clinical Response to Colchicine-Treated Patients (●) compared with Placebo Patients (○) in Meek, Enrick & Giudice's FDA-Approved IND Number 21,807 Study. A covariance analysis of this data showed that these 4 parameters of sub-set study were similar in all of the Colchicine-treated patients. In the Colchicine-treated patients the Coefficient of Determination was 0.44 while in the non-Colchicine treated patients this same Coefficient was 0.02 (practically non-existent).⁸



Figs. 5A-5C: Immediate sciatic scoliosis response to Colchicine. Pictured is a 59-year-old actor who suffered several lower lumbar disk ruptures in the course of his long & distinguished acting career. Prior to seeing the author, the patient's many consultants tried all modus of usual spinal therapies without success & formidable Spinal Surgery was recommended as the only choice by the patient's many previous treating physicians & consultants. Following the very first intravenous of Colchicine, notice the dramatic change in the patient's sciatic scoliosis. This was accompanied by equally as dramatic pain relief. List was most marked @ the L4-5 level (arrow). Within a month the patient was nearly painfree. At the present time (May 9th, 1989), the patient is completely well, has resumed his fine acting career & plays golf thrice weekly. Through the use of Colchicine, this lucky patient was spared the risky agony curse of the spinal surgery experiment.

("Colchicine Proven Effective in Disk Disease"; Continued):

Prof. Xiao Yu Mu (et al) of Shandong Medical University, Shandong, China has proven that Oral Colchicine is effective in disk disease in his large double-blind study where a large group of disk-suffering patients were treated with Oral Colchicine (1 mgm/ day for 14 days) & the other similar group with Indocin (indomethacin) (75 mgm /day for 14 days). Patients who took Colchicine had a 61.5% excellent or good result, while the indomethacin group had only a 16.7% excellent or good result. Also, side-effects in the Colchicine-treated group were much less than those in the indomethacin-treated patients!⁹

Other actions of Colchicine in disk disease. Besides this anti-inflammatory activity, it is known that Colchicine causes an increase of endorphin-producing neurons in the spinal cord, thus increasing the patient's resistance to his painful disk.⁶

Painful crystalline depositories in and around the herniated disk. Most damaged disks and surrounding tissues have accumulated a certain amount of crystalline depository elements (gouty or calcium pyrophosphate dihydrate -or CPPD) in their interstices. These crystalline substances are exceedingly painful and irritating foci of inflammation. In these patients Colchicine is most effectual in bringing immediate dissolution and "de-inflammation" of these irritating crystalline deposits, thus allowing the patient instantaneous pain relief.¹⁰ It is also known that one of Colchicine's actions is anti-allergenic. There is a certain amount of atopism in the disk disease syndrome,¹¹ and Colchicine is quite efficacious in countering it.

Amyloid deposits in the disk. There have been found amyloid deposits in herniated disks.¹² Colchicine is an effective medication for preventing the deposition of amyloid in patients with Rheumatoid Arthritis or Mediterranean Fever.¹³ It may be that Colchicine prevents or ameliorates painful amyloid deposits in the damaged disk.

PROTOCOL FOR THE USE OF COLCHICINE IN DISKAL (AND OTHER) PAINFUL SPINAL DISORDERS

When the patient is first seen, I usually mix intravenous Colchicine (2-4 cc's or 1-2 mgm) with 8 cc's Sodium Salicylate because the patient is almost always in severe pain. I believe it is quite important to break the patient's pain cycle when he is first seen in the office. Colchicine may be given intravenously undiluted if you choose, and is probably as effective. I do not advise you to give more than 4 mgm of Colchicine intravenously to any given patient in one week. Also, the same vein should not be used for the Colchicine dosage to avoid post-Colchicine injection phlebalgia (see below) (unless you give the intravenous Colchicine in a diluted manner).

If the patient has intense muscle spasm, I might add 4 cc's of Calcium Gluconate (reducing the Sodium Salicylate to 4 cc's instead) to the intravenous mixture.

Length of Time of IV Colchicine Treatment. This intravenous Colchicine-Disk "cocktail" can be given once a day for 4 days. Then the intravenous Colchicine mixture is

("Length of Time of Colchicine Treatment IV", Continues):

administered biweekly, weekly or bimonthly until the patient is well.

Oral Colchicine. Simultaneously the patient takes oral Colchicine (0.6 to 1.8 mgm per day) until he is well. If the patient gets diarrhea from the oral Colchicine, dosage is reduced, or the patient may skip a day or two of it until the diarrhea comes under control. If the oral Colchicine is essential in the patient's therapy & he still gets diarrhea from small dosages, then kapectate or Pepto-Bismol may be used to control gastro-intestinal distress. Do not push oral Colchicine (as has been taught to you in medical school by the rheumatology department), for Colchicine is far too valuable a medication than to sensitize the patient's GI tract to it.

Non-Steroidal Anti-Inflammatory Medicines (NSAID). A good non-steroidal anti-inflammatory medication such as piroxicam [Feldene], naproxen [Naprosyn], Meclomen, Clinoril, Dolobid, Nalfon, Tolectin or Motrin may be added to the Colchicine therapeutic regimen if the patient still has some back or limb pain following the first few Colchicine treatments. Oftentimes, the immediate response to IV (or oral) Colchicine is so dramatic as to eliminate the need for oral NSAID's to control the patient's painful disk. Othertimes only the over-the-counter NSAID's are all that is necessary to control the patient's disk-pain.

Eliminate All Harmful, Habit-Forming Substances. Also, at the time the patient is first seen, he (or she) is advised to throw away all harmful, habit-forming substances (such as pain-killers, tobacco in all its forms, narcotics, tranquilizers, sleeping-pills, mood-elevators, coffee, tea & the like). I just tell the patient to flush these harmful items down the toilet! It takes about 3 days to recover from the harmful habituation of any substance, after which the major portion of the craving for that awful substance is over. All of these harmful, habit-forming substances interfere with proper disk-healing & also they tend to block the therapeutic actions of Colchicine! Many long-term pain-suffering people have collected these harmful, habit-forming substances over the many years of their previous attempts at treatment from other doctors (especially if they have had prior unsuccessful spinal surgeries or chymopapain done on them).

On occasion, no NSAID is needed at all to bring about disk-pain control & only the IV & oral Colchicine are required to complete the patient's proper disk healing.

Weight Reduction & Control of the Patient's Uric Acid Pool. Besides proper diet, weight reduction (see below) & stopping the use of tobacco & other harmful substances, sometimes it is necessary to control the patient's uric acid pool with Colbenemid, Anturane or allopurinol in order to hasten & enhance the patient's proper disk healing.

Invariably, without exception, in every instance of my large series of patients whom I have successfully treated with Colchicine over the past nearly 4 decades of my discovery, PAIN is the patient's major symptom. Once the patient's pain is treated through proper disk healing with Colchicine (& the use of the other logical therapeutic measures as outlined in this report), the patient leaves your care with his disk trouble cured & requires nothing further from you.

When the patient recovers, I see no need to continue IV Colchicine. Oral Colchicine should be continued on a daily maintenance basis to ensure good disk healing and eliminate the possibility that the patient might get a recurrence of his (or her) disk pain. All other NSAID medications may be stopped as soon as the patient no longer has back or limb pain.

Return of Sensation & Reflexes after Colchicine Therapy. Numbness is the very last symptom to disappear in Colchicine-treated disk disease patients. Deep tendon reflexes commonly reappear (sometimes within a few days) after the onset of Colchicine therapy. Muscle weakness must be work-at to get complete recovery. Seldom does spinal surgery ever effect recovery of the patient's deep tendon reflexes or return of their sensation! In fact, the only cases of paralysis or numb/dead limbs which I have seen in the many thousands & thousands of patients whom I have seen & treated over the past nearly 4 decades, have NEVER come as a result of disk trouble per se! Only when the patient has been unlucky to have had spinal surgery or chemonucleolysis (done by other surgeons) has the patient been left with paralysis or permanent numbness!

Reasons for Failed Therapy. It is imperative that the patient discontinue the use of all tobacco (or other harmful addictive substances). Tobacco & alcohol (& other dependency-producing substances) do interfere with Colchicine's effectiveness in patients who suffer disk disease. Smoking or chewing tobacco cuts down oxygenation and circulation to the intervertebral disk.¹⁴ The use of tobacco drastically reduces the body's own production of endorphans (our natural pain-relieving polypeptide).¹⁵

In a very large series of patients, years ago Prof. Norbert L. Enrick and I found that conservative therapy for disk disease is more likely to fail in those patients who smoke. Additionally, these patients who use tobacco (& alcohol) are more likely to have spinal surgery (or other dangerous invasive spinal procedure).¹⁶ Also, patients who smoke (or chew) tobacco are more likely to fail back surgery (and/or chemonucleolysis).^{17,18}

"Heartburn". If the patient develops "heartburn" (or acid-stomach) from non-steroidal anti-inflammatory medications, then this means that the NSAID does not agree with the patient and should be discontinued. Another NSAID may be tried in its place and/or antacid may be utilized to prevent gastrointestinal ulceration and frank GI bleeding. Some people routinely have heartburn and think this is a "natural" state-of-affairs. This is because their diet is routinely improper - for they consume animal products (or especially if they smoke or swallow the juice from chewing tobacco or cigars). It is essential to advise your patient to stop using animal products for food & to stop the use of tobacco & alcohol in all its forms (see "Proper Diet", below).

Caveat. If a patient will not reduce his weight, if he (or she) will not stop using tobacco or other harmful substances, or if they will not take the advised laboratory testing procedures (inclusive of the HIV antigen/antibody test), then I beg the patient to see another doctor!

Laboratory studies. Over the past 35 years of use of Colchicine (intravenously and orally), in thousands of

("Laboratory Studies" Continues):

patients whom I have treated with disk disease and the arthritides, I have *never once seen an abnormal laboratory test as a result of the patient's use of Colchicine!* I have seen *some abnormal liver tests as a result of the other oral nonsteroidal anti-inflammatory medication (NSAID) (e.g., Naprosyn, benoxaprofen, sulindac and Tolectin).*

I have seen 3 patients have "silent" upper GI bleeding from Clinoril and I have found 3 "silent" gastric ulcers from Feldene.

For this reason, it is a good idea to get baseline CBC, blood chemistry, and urinalyses on the patient when he is first seen. Also, it is imperative that each patient who is treated have a screening test for HIV. These tests should be repeated at yearly or bi-yearly intervals while the patient takes Colchicine (and the NSAID).

Over the years I have found only 2 patients (of several thousand) who were found to have borderline low WBC counts and who were taking Colchicine:

The first (R.T.) is an attractive 62 year-old housewife-saleslady who also had lupus erythematosus. Her WBC dipped to 3,400 (low normal is 3,700) when her lupus activity increased. Resuming Colchicine helped her lupus joint pains, and returned her WBC count to normal. Since taking Colchicine, her WBC count has returned to, and remained normal (for the sake of this paper, on May 5th, 1989 I repeated her WBC and found it to be 5,700 with a completely normal differential). This patient continues Colchicine per os as therapy for her lupus disease.

The other patient (B.C.) is a stunning 30 year old black secretary who had a cervical disk with right upper limb pain and numbness. She got good relief from IV and oral Colchicine. About 1 year later, she noted tiredness and dyspnea. Her WBC count dipped to 3,200. Chest x-ray showed increased bronchovascular markings and her Kveim test was positive. She had developed Boeck's sarcoidosis. Resuming Colchicine IV and orally, helped her disk pain, decreased her Boeck's sarcoid symptoms and returned her WBC to normal.

Low WBC counts are known to occur in Boeck's sarcoid, lupus erythematosus and in patients with prolonged and severe rheumatoid arthritis. Colchicine helps these patients maintain higher WBC's counts by decreasing the activity of their disease. Colchicine has absolutely had no adverse affect on the hematological system of any of the thousands of patients that I have treated for disk (or other painful inflammatory) disease. This is particularly true because the dosage needed to cure disk trouble (or to ameliorate rheumatoid or other arthritic disorder) is minimal.

Colchicine should never(!) be pushed (that is, given to the patient in excessive amounts) as has been recommended by rheumatologists in the past. Colchicine is much too valuable as a medication to take a chance of sensitizing the patient to it!

Another curious point about Colchicine's side-effects should be noted here. The reason why Colchicine is so safe is because of its side-effects. The patient knows when he gets a little too much of it. He develops a touch of diarrhea, or he gets some cramping sensations in the small muscles of his hands or feet. By not taking one or two dosages of Colchicine for a day or two, these symptoms disappear.

I have taken Colchicine daily (0.6-1.2 mgm) for over 20 years personally without any harmful side-effect whatsoever. The reason why I take it is because I would never give any of my patients anything that I wouldn't take myself. If a medication has a side-effect then I want to be the first one to experience it.

Safety in the Use of Colchicine. To give you an idea of the real safety of the use of Colchicine, in 1986, Marshall M. Kaplan (et al) from Tufts Univ. School of Medicine in Boston reported in the New England Journal of Medicine the marked effectiveness of oral Colchicine in the treatment of patients with severe cirrhosis of the liver. Their patients with severe cirrhosis of the liver who took oral Colchicine had a mortality rate *less than half* than those who were not given Colchicine (21% versus 47%).¹⁹ Also, these Colchicine-treated patients had other laboratory test markers which showed significant improvement in their cirrhosis (compared to the non-Colchicine treated group). The first reports of Colchicine effectiveness in cirrhosis of the liver were by David Kerenobich from Mexico City who in 1979 reported good results with Colchicine in cirrhosis in a double-blind randomized trial.²⁰ This same group in 1988 reported "the overall survival in the Colchicine group was markedly better than the placebo group". "The 5-year survival rates were 75% in the Colchicine group & 34% in the placebo group!"²¹

The "Serendipitous Good Side-Effects of Colchicine".²² In the December 1986 issue of Our Journal, I wrote of the "serendipitous 'good' side-effects of Colchicine usage."²² Besides Colchicine's effectiveness in treating anosmia (loss of the sense of smell), thrombophlebitis, malignant melanoma, return of frontal hair, return of darker hair colour, joint resurfacing, remission of psoriatic rheumatoid arthritis, relief from allergic sinusitis and amelioration of prostatic cancer metastases, it seems that Colchicine is effective in Chronic Lymphocytic Leukemia (CLL).^{23,24}

One patient (THP) whom I have treated for disk trouble also had Chronic Lymphocytic Leukemia (CLL). Because of the beneficial results previously reported for CLL with Colchicine usage,^{23,24} I checked the patient's before and after White Blood Count (WBC). Following Colchicine usage, the patient's WBC went down dramatically. After 5 weekly intravenous of Colchicine (1 mgm or 2 cc's), the patient's WBC dipped from a regularly-high 80,000 to 45,000. Also the patient's hemoglobin increased from 10.7 gm% to 12.2 gm%. For the purpose of this paper, the patient's hemoglobin was checked in May 1989 & is now 14.8 gm%! The patient no longer takes chemotherapy for his CLL, but continues his regular Colchicine dosages.

Beneficial actions of Colchicine such as these confirm in my mind that Colchicine, used in proper dosages (such as recommended in this monograph), besides being extremely safe, is man's most powerful & valuable medication. Also, it is apparent, that Colchicine usage over a long period of time in proper dosages has no harmful side-effects (hematologic or otherwise)!

Colchicine "Burn" & Delayed Colchicine Phlebalgia. The only real complications from the use of intravenous Colchicine are the problems of extravasation of it during IV delivery or Colchicine-irritation of vascular intima. These 2 complications can be entirely avoided & the remainder of this paper will deal with this subject (plus Trigger-Point Therapy & Proper Diet). Statistical analyses & results of this large series of patients (6000, of which over 1500 had failed spinal surgery [done by other surgeons]) will be the subject of another paper.

Guidelines for IV Colchicine delivery:

1. Great care should be exercised in giving IV Colchicine to any patient. Pick the patient's best vein. The patient should be recumbent for at least his first intravenous. The mere fact of venipuncture is attended by a drop in many patient's blood pressure. This drop in blood pressure (due to venipuncture) is erroneously thought by novitiates to be the effect of medication. Young people especially are apprehensive about having their veins

26g 3/8" SHORT-BEVELED. BD.
DISPOSABLE NEEDLES

("Guidelines For IV Colchicine Usage"; Continued):

needed and it is imperative that youngsters be recumbent during IV delivery of any kind!

2. Do not give Colchicine in any limb that has had lymphatic or vascular damage (e.g., the limb ipsilateral to radical mastectomy).

3. If one is not proficient in intravenous techniques, do not practice with Colchicine! Use some other less powerful medication. Employ the needle system that best suits your technique (I like the number 26 gauge, 3/8th's inch, short-beveled BD, sterile disposable needle). Many prefer the 27 gauge "butterfly" needle. Prof. Michael Margoles of San Jose, California uses a two-way stopcock and flushes the system before and after Colchicine with normal sterile saline.

4. The Practitioner himself must deliver the intravenous Colchicine to his patient. He should entrust this procedure to no one else.

5. Any patient who has had a history of reflex sympathetic dystrophy (RSD) (or causalgia) in the past, or who you might suspect will develop RSD (pain out of proportion to the disorder, decreased temperature of the limb, hypersensitivity to touch, stiffness & swelling & increased sweating) should never receive repeated injections of undiluted intravenous Colchicine in the same vein. Repeated IV's of undiluted Colchicine into the same vein close together in time (2-3 IV's of undiluted Colchicine in the same vein in one week) will burn the intima of that vein & could cause enough pain to give your patient RSD. If the patient has only one good vein & needs repeated injections of Colchicine, then the IV Colchicine must be diluted to avoid post-IV-Colchicine phlebalgia.

6. Intravenous Colchicine may be diluted in 250 to 500 cc's of NSS or 5% D/W. A number 27 butterfly needle should be used to start the intravenous & then the Colchicine added to the solution after you are sure the vein is patent & blood flow is free.

7. All patients receiving any IV of Colchicine (diluted or not) must be watched closely by the doctor for any signs of infiltration. If infiltration of the IV should occur, the IV Colchicine drip must be discontinued immediately! A new location for the IV should be found.

8. Any novice-practitioner in the use of IV Colchicine must never use IV Colchicine as a holus. Novice-practitioners in the use of IV Colchicine should routinely dilute IV Colchicine in large amounts of normal sterile saline or sterile 5% D/W (as mentioned in number 2 above).

9. If a patient has pain at the needle-site during any IV Colchicine injection, you must stop that intravenous & select another Colchicine IV injection-site. If the pain at the Colchicine injection-site persists after removal of the IV needle, then the patient has a Colchicine Burn -until proven otherwise.

10. If a patient develops pain in his arm several hours or days after IV Colchicine usage, he must be suspected to have developed post-IV-Colchicine phlebalgia until proven otherwise. Do not use that same limb for any more IV Colchicine (diluted or not!) until that phlebalgia is properly treated (see below) or resolves itself. If the patient develops Colchicine phlebalgia from diluted Colchicine, then either use a smaller dosage of Colchicine, or do not use Colchicine at all. [You may wish to use another IV anti-inflammatory (e.g., sodium salicylate or IV indomethacin)].

11. Give the IV Colchicine (mixture) slowly and carefully. One must keep his eyes "glued" on the delivery site. You can tell in an instant that you have extravasated Colchicine by the dreaded "bleb" formation at the needle site around the vein. This visible "bleb" of extravasated Colchicine precedes the patient's sensation of pain by several milliseconds. Adding Sodium Salicylate to the Colchicine increases the intensity of the patient's immediate pain (if there is extravasation), but by the same token, it does dilute the Colchicine making the "burn" less annoying, in the long run.²⁵

12. Use the number 30 gauge sterile disposable 1 inch or 1/2 inch needles for these "triggerpoint" injections around the vein & in areas of severe, intense discomfort.

Treatment of Post-IV-Colchicine Phlebalgia. Treatment of post-IV-Colchicine phlebalgia entails the following:

1. Inject the burned vein with an intravenous of 1cc of lidocaine mixed with 1/2 cc of betadexamethasone phosphate along with 5 cc's of NSS. Prof. Michael Margoles uses the betadexamethasone phosphate at the time of his diluted IV Colchicine infusion to prevent this phlebalgic complication from occurring.²⁴ Prof. Herman J. Weinreb uses 1cc of lidocaine at the time of the Colchicine infusion to prevent the complication of post-IV-Colchicine phlebalgia from occurring.²⁷

2. If you suspect that your patient is RSD-prone (e.g. has signs & symptoms as noted in number 5 above), then besides using your Colchicine diluted, add the lidocaine & the 1/2 cc of betadexamethasone phosphate to the IV Colchicine infusion. Do not give undiluted Colchicine into the same vein more than 2 times per week. Generally speaking, any given patient should not receive more than 4 mgm of IV Colchicine in one week anyway.

3. Cryotherapy, hot packs, injection of trigger points in the phlebalgic limb are indicated. Injecting the area of the phlebalgia (if it can be found) would be quite helpful. To my knowledge I have seen post-IV-Colchicine phlebalgia only once in an elderly gentleman who had ankylosing spondylitis. He was a heavy tobacco user & had very delicate veins. He is reported in my very first Colchicine paper.¹

Treatment of Colchicine Burns. Colchicine burns must be properly treated. I have discussed this treatment in my other Colchicine-disk treatment papers,^{1,3,25} but will repeat this here with some other new techniques.

1. Do not use plastic intra-catheters for IV Colchicine. The Colchicine will leak around the intra-cath & the patient will get a Colchicine Burn. Large needles (larger than 26 gauge should not be used for IV Colchicine because the Colchicine has a tendency to leak around this large needle & your patient will get a Colchicine-burn. The number 27 gauge butterfly needle is ideal for intravenous Colchicine delivery (I prefer to use the number 26 gauge 3/8" short bevel [sterile, disposable] needle, myself, because this marvelous little wonder has worked beautifully for me over the many years of my use of it). Always pick the patient's best, largest & easiest-of-access veins for IV Colchicine. Generously dilute the Colchicine if you aren't sure about the vein. Give the IV Colchicine slowly & carefully. Do not be careless or nonchalant about IV Colchicine delivery.

2. If you are unlucky enough to get Colchicine outside the vein-site, stop the IV Colchicine immediately. Remove the needle. Inject the "burn" site using Marcaine (0.5%) mixed with a few drops of triamcinolone acetonide. Prof. Vincent Giudice feels daily injecting the Colchicine burn-site is the most valuable method for treatment of a patient with Colchicine burn.²⁸ Dr. Giudice recommends that the Colchicine burn-site be injected daily by the doctor (even on Sundays), to give the patient proper pain-relief. He notes after the many thousands of IV Colchicine deliveries which he has performed, that should you be unlucky enough to get a Colchicine-burn, that "it always heals, with his method".²⁸

3. Apply copious amounts of 1% Dibucaine, or 4% lidocaine ointments to the Colchicine-Burn-Site. Triamcinolone acetonide ointments are also valuable for the burn-site. Injecting the interior of the vein with small amounts of a soluble betadexamethasone phosphate is an effective Colchicine burn-treating technique.

4. Benadryl cream applied to the burn-site will be most helpful if the above measures don't help. Some people swear by aloe-vera lotion, or use the cut-surface of the aloe vera plant applied to the burn site. Other patients like the use of sterile 50% dimethyl sulfoxide (DMSO) applied to the burn site. I also recommend to the patient to use oral Benadryl (50 to 100 mgm) to combat the histamine aspects of the Colchicine Burn. Oral phenytoin (which I have not yet had to use) would be a most effectual medication to relieve the patient's anxieties in the case of a severe Colchicine burn (I would also recommend the use of phenytoin in patients who might develop RSD from a post-IV-Colchicine phlebalgia).

("Treatment of Colchicine Burns", Continues):

5. A nice little trick which I have used on the very rare occasions that I have seen a Colchicine burn, in the patient who has had the Colchicine burn-pain for too long a period of time & who seems to be stationary as far as recovery of that burn is concerned, is to administer 20 units of IM ACTH (the effect sometimes is quite dramatic & miraculous).
6. Hot-packs, warm compresses & cryotherapy are effectual & comforting for the Colchicine burn-site. Sometimes ice-packs are more beneficial than heat. At times both must be used to get the patient over the worst of the burn.
7. I have burned myself with Colchicine intentionally on several occasions just to see what kind of pain Colchicine-Burn is & how long it takes to heal. A Colchicine Burn is most annoying to say the least & the back of the hand seems to be the worst area for such a burn. I have given upwards of 2 cc's of IV Colchicine (1 mg) beneath the skin of my abdominal wall & the reaction was quite painful for about 1½ days, but after that it wasn't bothersome. I used a radial vein once for IV Colchicine on myself & burned the skin there. The Colchicine Burn there healed completely in about 10 days, but I vividly remember the character of that pain to this day.
8. Some patients get IV Colchicine outside their veins at the IV Colchicine injection-site & do not get a burn at all! I do not understand this completely. I suppose that some IV Colchicine is not as fresh or as strong as others from the Eli Lilly Company, or that some patients are immune to the pain of the Colchicine burn itself! The converse of this is that some patients seem too sensitive to intravenous Colchicine. I would not give IV Colchicine undiluted to anyone who you might suspect is overly sensitive to the effects of IV Colchicine. That "sensitive" patient is the type to develop too much pain from a Colchicine burn or who may get RSD from post-IV-Colchicine phlebalgia.

Other Colchicine Side-Effects. Diarrhea & cramps in the small muscles of the hands & feet are Colchicine's main side-effects. These actions inform the patient that he is getting enough Colchicine. I do not like the patient to take too much Colchicine at any given time, in order to avoid sensitization of the patient to its more valuable properties. As Prof. Herman J. Weinreb noted at our 12th Annual Convention:²⁹ "Colchicine is a marvelous medication because its side-effects are easily reversed, merely by stopping the medication."

Genetic effects. At the dosages I recommend, Colchicine does not have any genetic side-effect - no matter how long one takes the medication. Literally thousands of young men have taken Colchicine at some time during their lives for the treatment of gouty arthritic (or diskal) complaints, and this patient population has conceived thousands of perfectly healthy, normal children without any genetic problems (myself included in this series - for God has blessed me with 4 healthy, normal beautiful children!). Additionally, I have had scores of young men patients who have produced normal healthy children while taking Colchicine (even though I specifically told them to stop Colchicine [& all medication, for that matter] for at least a month - especially if they planned to impregnate their wives). I always instruct my patients who are of the childbearing age not to take Colchicine (or any medication) for at least 1 month prior to conceiving children, just to be on the safe side. I have 5 young lady-patients who continued taking Colchicine (even though I expressly told them to stop all medications before becoming pregnant). They continued to take Colchicine because they simply could not function without it (e.g.: disabling lupus erythematosus, crippling rheumatoid disease). These same 5 young ladies produced 5 beautiful perfectly normal & healthy "Colchicine" babies. As I have previously noted:³ "The amount of Colchicine I recommend is 1.2-1.8 mgm per day, which is equivalent to 0.02 mgm/kg per day in a 70 kg man. This is an infinitesimally small amount compared to the dosage overload that is required in genetic experiments (5 mgm/kg!!)."³⁰

Other Colchicine Articles.³¹⁻⁴² Prof. Tony Francis has written a superb paper on the "Theoretical Actions of Colchicine in Disk Disease" (with 981 references!).³¹ Prof. Vincent Giudice has published 2 fine papers on Colchicine.³²⁻³³ Prof. Michael Margoles has published sundry articles & notes on Colchicine.³⁴⁻³⁷ Prof. William Lewis has written an excellent article.³⁸ Prof. Gonzalo Ibarra-Izunza has 2 fine papers.^{39,40} Prof. Kush Kumar has published on intra-articular Colchicine usage,⁴¹ & Dr. C. Ronald McBride has also published on Colchicine.⁴² There are many more

papers & articles (including 2 by Prof. Shafik G. Elzayat)^{43,44} on Colchicine Treatment in Disk Disease, but there is not room enough in this paper to publish all references.

OTHER ESSENTIAL THERAPEUTIC MEASURES INJECTION OF TRIGGERPOINTS PROPER DIET

Injection of "Trigger-Points". This is equally as important in the proper treatment of diskal disorders as the use of IV & oral Colchicine. The name "triggerpoint" is a misnomer, for it euphemistically trivializes the disabling intensity of this severely painful locus of acute or chronic inflammation. I prefer to call these severely painful & disabling areas: "Foci of Intense Inflammation". Proper treatment of these focal "triggerpoints" is a singularly important part of disk therapy for any patient. I have seen too many patients who have had unsuccessful spinal surgery done upon them by other surgeons and in whom the reason for the failed back surgery was because the surgeon neglected to treat the patient's painful triggerpoints in the patient's limb or trunk! Had this been done and the patient given Colchicine, the patient would have never had to have myelographic or surgical trauma!

Technique. This will be the subject of another paper because the present dissertation is already getting a little too long and I wish the format to fit our printer's 8-page signature. Published in our Journal are several fine papers on Trigger-Point Therapy.⁴⁵⁻⁴⁷ Also, those of you who do not have Drs. Janet Travell and David Simons' "Myofascial Pain & Dysfunction: The Triggerpoint Manual", should purchase it for it is a must! I have described my complete Triggerpoint technique in my review of their book (JONOMAS 5: 382, 1984), and I have also annotated it in other articles (e.g., "Cervical Spinal Subluxation", JONOMAS 5: 274-276, 1984).

For now suffice it to say that the triggerpoints must be carefully found in your patient's trunk or limbs, and then very atraumatically injected, utilizing tiny number 30 gauge 1 inch, sterile disposable needles so that the patient has the least amount of pain during injection. (These fine needles may be purchased from: MPL, 1-800-621-6421, 1820 W. Roscoe St., Chicago, IL 60657). The main ingredient of my triggerpoint injection mixture is Marcaine (0.5%), to which I may add lidocaine HCl (0.1%), or procaine HCl (2%) to enhance Marcaine's effectiveness. Lately I have been adding to this mix a few drops of a very, very dilute solution of Colchicine.⁴⁸ This has worked most effectively for me for many years, and there are no harmful side-effects from this gentle, atraumatic, sterile technique.

Proper Diet (Discontinuance of Tobacco & Alcoholic Beverages) & Weight Reduction. Proper diet & weight reduction are essential elements in the treatment of those who suffer painful disk disease. It is also imperative that the patient discontinue tobacco & all other harmful dependency-producing substance. This is especially true if the patient has had unsuccessful spinal surgery. I simply tell my patients to flush all pain-pills, narcotics, sleeping pills, tranquilizers, mood elevators (& their ilk) down their toilet!

Indeed, all other harmful substances, such as, tobacco, rich foods, caffeinated beverages (tea, coffee, caffeinated soft drinks), alcoholic beverages, beer, wine, cheese, pastries, dairy products (or any food that comes from animal or fish product), ice cream, butter, creamed cheese, all nuts (roasted or otherwise), all breads, juices, rich desserts, shellfish, adulterated foods or concoctions (e.g.: Ritz crackers, Oreo Cookies, potato chips), must be discontinued by the patient, especially if he (or she) is overweight.

The Nightshades. The "deadly" nightshade grouping of foods (potatoes, tomatoes, green & red peppers, hot peppers, eggplant & tobacco!) - must be avoided at all costs by the pain-suffering disk patient - because ingestion & use of these substances can cause painful syndromes. Use of the nightshades will perpetuate, if not cause, an attack of back or neck pain & sciatica.⁴⁹ The deadly nightshades (genus: *Solanum*) are a group which have star-shaped

("Avoid the Deadly Nightshades", Continues):

flowers with showy berries. There are 92 genera & 2000 species of this plant. It is 2nd only to grain for its importance as food for man. Nightshade ingestion causes: pain, headache, heart pains, tennis elbow, facial neuralgia, muscle spasms, paralysis of the legs, nausea, loss of appetite, vomiting, bleeding, asthma, canker sores, frozen shoulder, tender nipples, poor endurance, tingling in the hands & legs, menopausal symptoms & joint swelling!*

Other Foods to be Avoided. These include those which are highly sweetened, too starchy or too loaded with fats. Abundant quantities of fresh fruit and vegetables are to be eaten daily. Any fat which turns hard in the refrigerator is not to be eaten. Especially bad for disk disease patients are: foods containing or made from any animal product, e.g.: eggs, dairy products, any sort of meat or fowl, shellfish of all types, fish, lard, hydrogenated fats, foods high in cholesterol, tobacco, cheese, pastries, desserts, fatty meats, and white breads. Vegetables need to be eaten in their natural state or very lightly steamed. Fruits are to be eaten in great abundance. Food additives are to be avoided, especially monosodium glutamate (MSG). To prevent crystalline deposits around the damaged disk, it is important also to avoid highly cellular foods, such as sweetbread, liver, cheese, fatty meats, sardines or alcoholic beverages. The patient must become super-thin on good food. Patients who use tobacco to keep their weight down have a sad psychological problem, the answer to which I do not have. Regarding smoking, tobacco use and disk trouble, Professors Norbert L. Enrick, Buddy Myers and I found in a series of 200 patients that the person who smoked was more likely to have disk disease in the first place, more likely to fail conservative therapy for his disk disease, more likely to have surgery, and less likely to have a good result from surgery. 17,18

This series. The statistical details of this series of 6000 patients will be the subject of another paper for our Journal. There were slightly more women than men (3123 to 2877). The overall success rate using Colchicine (& my other measures as described above) in these patients (including the 1497 other surgeons' unsuccessful spinal surgery and chemonucleolysis patients) is 92 percent. If one excludes the 1497 painful other surgeons' previously-operated (or diskolysed) patients, then the success rate for Colchicine jumps to 96 percent! [By "success", I mean complete, or nearcomplete relief of the patient's limb, & neck and/or back pain! and- return of the patient to his former employment!]

SUMMARY

Six thousand patients with painful diskal and other spinal disorders have been treated by the author using Colchicine for the past nearly 35 years. The overall success rate for this type of atraumatic and harmless treatment method (for disk disease) is 92 percent! Colchicine is effective in relieving the patients' neck, back and limb pain and also allows the patient to return to his former employment without complications.

Besides being extremely effective, Colchicine is an exceedingly safe medication. Over the many years of my use of it, I have found Colchicine to be infinitely more efficacious and, indeed, safer to use than aspirin. Complications from Colchicine use are not haematologic (particularly when used in the dosages recommended in this report). The only real complications from Colchicine usage are Colchicine "burn" from extravasation of the intravenous form, or delayed Colchicine phlebalgia (from intimal irritation). These irritations are easily treated as outlined in the body of this monograph. It is quite apparent that herniated intervertebral disk disease is a truly benign non-surgical disorder & is self-limiting for the most part. In patients with resistant disk disease (resistant to ordinary home remedies or to formal Neurological-Orthopaedic procedures & surgeries), the use of Colchicine will rapidly & safely return the patient to a painfree, functional working state. ●

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