

## THE CLINICAL ASPECTS OF CHRONIC VITAMIN D AND CALCIUM DEFICIENCY.

The origin and development of this clinical study, therapy of the deficiency, and the chemistry and some of the biochemistry of calcium have been described in other writings and a book.

The object of this writing is to largely to define the clinical application of that clinical discovery. As that discovery involved the study of several patients within one week of the spring of 1955, and since those patients are very descriptive of the basic features of the deficiency state and of their clinical inter-relationship, it is appropriate that they be defined.

The first of those patients was a dairyman's wife whose chronic diarrhoea and some rhinitis were worsened in the springtime as her husband brought her rich cream that was even slightly colored green by the new grass that the cattle had eaten. As both she and I attributed that to allergy to some component of milk I put her on a milk free diet. Within a relatively short time she reported that, while the diarrhoea and rhinitis were partially relieved, she noted severe cramping in a leg which some muscle atrophy had occurred following an attack of polio as a child. On that basis I gave her twice daily intravenous injections of calcium gluconate following which her leg cramping was not only relieved but she experienced marked relief of her rhinitis and diarrhoea. I therefore concluded that instead of her chronic diarrhoea being due to allergy that it was largely related to intestinal smooth muscle spasm caused by deficiency of calcium. This was which spasm that I had both aggravated by my dietary therapy and relived by my mineral and vitamin therapy.

The second of those patients was a nineteen year old bank clerk who suffered severe constipation that required the taking of castor oil. At that time the only other anti-constipant available was "milk of magnesia". On the experience with the above mentioned patient I gave her the same therapy to note rapid resolution of her complaint. I then carried her on with oral therapy of calcium and the A and D vitamins and dietary therapy.

The third patient was a middle aged woman who had suffered from chronic asthma for many years. She contended with this disease at night time by sleeping elevated on many pillows and surrounding herself with papers and magazines that she would read while she dozed. On the experience of the relief of obvious intestinal spasm in the previous two case I gave her the same therapy in the hope that it would relieve her bronchial spasm. Within several days she reported that she had awoken face down in her papers breathing easily. On that basis I prescribed bone meal tablets and halibut liver oil capsules three times daily.

The fourth patient was a nine year old boy who had experienced severe asthma for seven years that now compelled him to remain indoors permanently, and to subsist on a diet that consisted solely of macaroni and eggs. On examination, as well as being asthmatic and asthenic, I found very pronounced signs of increased myotatic irritability. These signs were present to a degree that rapid percussion of the recti-abdominus muscle with the outstretched finger tips produced a succession of myoedemic contractions in various phases of development and recession. Such very marked expression of that muscle finding was described only once previously by Drs. Graves and Stokes in an 1837 issue of the Dublin Hospital Report, the initial report of those clinical findings.

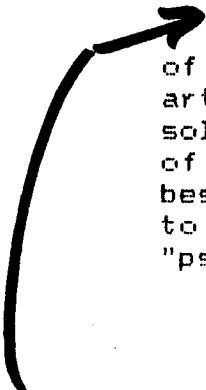
On therapy of one halibut liver oil capsule and one bone meal tablet three times daily the patients asthma resolved rapidly to a very marked degree within a week to ten days.

In that and other cases therapy with bone meal was replaced with dolomite tablets and therapy with the oily solution of the A and D-3 vitamins fortified by an aqueous solution of natural vitamin A and synthetic vitamin D-2. Those four cases, therefore, represent the basics of the therapy.

Over the following thirty years such therapy was given to many thousands of calcium and vitamin D deficient patients. These were patients suffering one or more overt disease of various organs, or single or multiple complaints and physical signs arising in muscle or other tissue, or a combination of such disease and complaints.

The study of those patients indicated that the lifestyle defects responsible for those clinical findings was one which gave rise to chronic deficiency of dietary calcium and of the dietary and sun-on-skin generated D vitamins.

Shortly after discovery of the relationship of disease and of separate functional and physical findings to those lifestyle defects I amalgamated those findings into a syndrome which later was defined as the "ionic calcium deficiency syndrome". The finding of even one of those findings in a non diseased individual, such as recurrent headaches, frequent nocturnal leg cramps, nasal "allergies", constipation or alternating constipation and diarrhoea, were treated in like fashion and accepted as indication of proneness to the development of more serious complaints, or of an overt "mal-adaptive" disease.



This study, therefore, represents a pure clinical study of patients which constitutes application of the clinical art. As such an art clinical such study may present more solutions to the health problems of the public than pursuit of the "science of medicine". As such an art possibly the best which can result from the gross application of science to medicine is the creation of a relatively ineffectual "pseudo-science".

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Of those findings, for almost twenty years, the finding of signs of increased myotatic irritability were initially accepted as the "trade-mark" of the deficiency state. In the mid 1970s this position was relegated to the finding of an increased acidity of saliva. This sign which was accepted as a reflection of the presence of acidifying adaptive function of various organs which at that time may have given rise to disease, or may have been asymptomatic with the potential of deteriorating to develop a disease.