

BLOOD CHEMISTRY IN MINOR DYSCRASIAS  
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Deafened persons who have reached the end of the second and the middle of the third decade of life, begin to show physiological dysfunctions. These are so insignificant a nature that the individual goes along in apparent good general health to all appearances, never suspecting that a basic dysfunction centered in the interaction of hormones, endocrines and vitamins are present. In most cases the only abnormality to be found upon a general physical check-up is the deafness.

Yet the patient suffers from dysfunctions stemming from some endocrine gland, or the lack of some vitamin, in spite of ingesting a balanced diet.

These minor dyscrasias antecede the appearance of anatomico-pathological lesions.

Like the differential diagnosis of an intracranial bacterial invasion which always precedes, a meningeal tissue reaction of bacteria produced inflammation, in which the chemical analysis of the spinal fluid gave me the key to remedial therapy, so too, in these problems inherent with deafness, the chemical analysis of the patient's whole blood, blood plasma, and blood serum presents pertinent factors not only indicating physiological dysfunctions, but giving the key toward purposeful medical therapy in cases of deafness.

We can comprehend dyscrasias when they are severe, as when we encounter them involving the metabolism of calcium in relation to health of bone, as seen in Paget's disease, acromegalia, osteomalacia, and rickets. We are wont to diagnose these conditions as deficiency diseases. They present deafness, too, in their symptomatology. Rickets in small children is not often otologically examined and

otosclerosis has a pathology strongly suggesting that it may be classified also as belonging in this group.

There is another lesion which we find among those whose dominant symptom is deafness. This bears on calcium metabolism. Here there are calcium deposits of minor nature, small in degree, deposited in various parts of the middle ear structure, secondary to mild inflammatory tissue reactions of bacterial origin. The tissues, having been injured by bacterial action, or bacterial toxins, intermediary enzyme activity ensues which terminated by producing dystrophic calcium deposits either in the dying or the chronically inflamed tissues of the middle ear.

Ordinarily such local reactions occur even though a manifest purulent otitis media has never become fully developed clinically to form exudate in the tympanic cavity. They remain in the preliminary phases of transudate and are recognized clinically as being in the so-called catarrhal category.

The condition often is presented during a common cold or as incidental to a general systemic infection,-- the exanthemata,-- or as a by-product of an allergy.

In taking histories of deafened persons the story of suffering from repeated colds is common enough. When we come across a case which has had a radical mastoidectomy performed many years ago, and whose history when coming under observation years later, gives evidence of suffering from repeated colds and one carefully examines the surgical cavity left as the end-result of a carefully performed radical mastoidectomy, one often observes such calcium deposits.

In passing, the comment is pertinent that not all allergies affecting hearing give so dramatic a picture. There are many cases of undetermined nature often erroneously diagnosed as paranasal sinus lesions. In these the calcium imbalance by its tendency to increase capillary permeability is a factor at issue. In Chart IV the evidence presented by 103 examinations of the total protein percentage shows a blood level anent this item in 53 instances indicating a trend toward hypoproteinemia. In 97 examinations 60 gave evidence of decreased albumin percentages. Thus the edemas from allergy and the so-called idiopathic edemas including those associated with Meniere's symptom complex may be traced back to the factors underlying diminished fluid re-absorption. These factors among others are to be found in the calcium imbalance and the low protein percentages as evidenced in the blood chemistry.