

It was noted that the general tendency was for the cultures to increase in pH with less rapidity in the presence of carbohydrate. This was attributed to the protein sparing action of carbohydrates.

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Clinical Pathology and Bacteriological Study of Non-erupted Mandibular Molars.*

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This report suggests a classification of the various lesions of soft tissues produced by the difficult eruption of mandibular third molars. In addition it presents a bacteriological study of dental pulps dissected from embedded teeth which were extracted.

Unerupted teeth are classified as either impacted or embedded depending upon their relation to adjacent teeth and overlying bone. Both types may produce neuralgia and other lesions of nerve, muscle or organs of special sense. The local inflammatory reactions are classified under 4 general heads: (1) Simple pericoronitis; (2) Suppurative pericoronitis (acute and chronic); (3) Diffuse pericoronitis; (4) Hypertrophic or hyperplastic pericoronitis. These several conditions require certain precautions in preliminary treatment but call ultimately for the removal of the tooth.

The bacteriological study of the vital pulps of unerupted third molars is a virgin field. The organisms of dental caries and pyorrhea have been extensively studied but no report has been published so far as we have been able to discover, of a bacteriological research upon dental pulps of embedded teeth. Only teeth with unbroken or non-mutilated crowns and roots were utilized. The technic of sterilization of tissues and instruments before and after extraction was carefully checked against accidental contamination from bacteria.

From an examination of embedded and impacted teeth where pericoronitis had developed it was found that over three-fourths gave cultures of non-hemolytic green producing streptococcus. This relative frequency is probably due, first, to the fact that unerupted third molars have larger apical foramina than erupted teeth. Thus, there is greater opportunity for organisms to gain access to the pulp.

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Second, the pouch of the follicle which is attached to the neck of the unerupted tooth is very susceptible to infection. Nevertheless, it is pointed out that in some cases pericoronitis may exist for years without causing acute symptoms. At a later time conditions may develop which favor the development of the organisms. Furthermore, a higher degree of virulence may arise and thus a latent infection may flare up into an acute one.

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Treatment of Rickets With Irradiated Ergosterol (Vigantol).

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The absence of any clinical report of the effect of irradiated ergosterol on human rickets in the American literature seemed to justify recording the results obtained in 9 cases of rickets treated with Vigantol. Both the German product and the first American product were used. The latter was prepared by the Winthrop Chemical Company. Hess¹ has already reported successful results in experimental rat rickets with ergosterol and in human rickets through the use of irradiated yeast.

The researches of Windaus, Hess, Pohl, Rosenheim,² and their co-workers established the fact that ergosterol is the provitamine which becomes Vitamine D after irradiation for $\frac{1}{2}$ to 12 hours. If irradiated longer, its power of being activated is gradually lost, being completely lost after 80 hours of exposure to ultraviolet rays. It is obtained from yeast, ergot, and mushrooms, and occurs as a contaminator of cholesterol from 1/20 to 1/50%. It is oxidized if exposed to air for a long time, but if kept in oil (as Vigantol) it retains its potency for at least 6 months.

Rosenheim, Gyorgy,³ Hottinger,⁴ and others have shown that irradiated ergosterol is 20,000 times as antiricketic as cod liver oil and that in dosage of 1/10000 mg. daily it prevents rickets in a rat on a ricketic diet, and that 1-5 mg. daily heals human rickets, osteomalacia, tetany, and rickets tarda and is also effective prophylactically in

¹ Hess, A. F., *J. Am. Med. Assn.*, July 30, 1927.

² Rosenheim, O., and Webster, T. A., *Biochem. J.*, 1927, **xxi**, 127; *Lancet*, Feb., 1927.

³ Gyorgy, P., *Klin. Woch.*, 1927, **xiii**, 580.

⁴ Hottinger, A., *Z. f. Kinderheil*, 1927, **xliii**, 8; 1927, **xliv**, 3.