BLOOD INFECTION OF THE SUBMAXILLARY GLAND.

BY

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AN acute suppurative inflammation of the salivary glands is in most cases an ascending infection from the duct, predisposed to by a diminished flow of the secretion, by fever, and by a depressed general condition. So is it seen in most post-operative abdominal cases. The condition is usually classed as an ascending infection when there are obvious signs of the duct being the source—as, for example, a bright red protrusion of the duct mucosa or a string of cloudy mucus or pus exuding from the duct. In this type of case the primary symptoms are those of recurring duct infections.

A recent writer states that there is no absolute proof that a blood-borne infection is an occasional cause of acute suppurative inflammation of the salivary glands. The following case seems to be worth recording as most probably a blood-borne infection supervening on a duct obstruction inflammation.

J. S., aged 37, was wounded on September 14th, 1914, by a shell through the right elbow-joint. The joint was shattered, and sinuses discharged for several years without intermission. In March, 1915, the wound healed, the joint having become ankylosed at a right angle; the forearm was also fixed. The wound after this frequently—every few months—was the site of an acute inflammation and abscess formation, but at no time were there any definite sequestra visible on x-ray examination or palpable by probe. About 1920 he began to notice that at every acute exacerbation of the gunshot wound his right submaxillary region was the site of a tender swelling which caused pain on moving his jaw, and headaches. He consulted his doctor at this time about it and was advised to have his teeth removed. He had a complete clear-out of both upper and lower jaws, but without any benefit.

On July 26th, 1923, I saw him in consultation. He complained of a tender swelling under the right lower jaw, pain on eating, and headaches, the present attack dating from May, 1923, when he had an acute flare-up in the elbow-joint. The pain is caused by the actual movements of eating, but he states that the sight of food makes no appreciable difference either in the pain or in the size of the swelling. The present swelling came on just before he had an abscess in his elbow incised in May.

There was a rather hard and nodular swelling about the size of a walnut in the right submaxillary triangle; it was freely movable under the skin and on the underlying tissue, but was slightly tender. A string of pus was exuding from the oral exit of the submaxillary duct. It was removed (1½ in. long), and a piece of silkworm gut passed almost the length of the gland, but no obstruction or anything suggesting stone was felt. X-ray examination showed no evidence of stone in the submaxillary gland.

The elbow-joint at this time showed a sinus of about 1 in., but with no palpable dead bone. There was no acute inflammation in this region. The cast (string of pus) from the duct was retained in a sterile test tube and bacteriologically examined. Pus was also taken from the sinus in the arm. The report was as follows: "In each case there was present a Gram-negative bacillus fermenting glucose with the formation of acid but no gas and not liquefying gelatin in two days." The treatment advised was excision of the submaxillary gland.

On September 13th, 1923, under a general anaesthetic the gland was carefully dissected and removed. There was extensive fibrosis around, the natural sequence of the recurring attacks of inflammation, making the operation somewhat more difficult and rather obscuring the landmarks. The wound healed by first intention.

On sectioning the gland it was most interesting to find a small calculus about the size of a pea embedded in a part of the gland which had become much fibrosed.

Inflammation of the salivary glands is usually divided into three classes—the primary inflammation or mumps, the ascending duct infection common in abdominal conditions, and the third that round a calculus. The case recorded is typical of the third class, and would be ordinary but for the interesting history and sequence of symptoms. It would appear that this is a blood-borne infection from the elbow wound, though it would have been interesting to know whether the same organisms could have been recovered from the blood.

In reading some of the literature on inflammation of the salivary glands it is striking to note in the histories of several cases the occurrence in the obstructive type of another infective source in the body. For instance, in one case recorded by Blair and Padget the swelling followed the partial extraction of a tooth, and recurred six months later when the roots which had been left and were septic were removed. Another case followed on tonsillectomy. In both these cases the so-called focal infection was situate in

the mouth, so that it was difficult to be sure that it was a blood infection; but in the case recorded there seems little doubt that the bacillus causing the bone trouble had also an elective affinity for the submaxillary gland, and that the infection was by the blood stream.

AMIDOPYRIN IN THE TREATMENT OF MEASLES.

BY

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IN a trial extending over more than a dozen years I have come to the conclusion that amidopyrin,* in the treatment of measles, gives results which show it to have a specific curative action. If given at the first appearance of the rash the results are as follows:

1. Reduction of temperature to normal or nearly normal within twelve hours. This effect is permanent.

2. The development of the rash is sometimes entirely, always partly, inhibited; if it has already affected the face, it will come out in only scanty spots on the trunk and extremities. The spots which appear after its administration, moreover, are pale and evanescent. In one case I succeeded in preventing the appearance of the rash altogether in an undoubted case of measles in a family other members of which were already affected.

3. The most important effect to the sufferer is an immediate euphoria; children who in the evening are prostrated and suffering great distress are cheerful and happy on the following morning. The testimony of adult sufferers is convincing on this point.

4. Cough, coryza, and conjunctivitis all clear up within a day or two.

The average duration of the attack from the first show of the rash in untreated cases or cases treated by other methods is from two or four days; I have never seen any serious or distressing symptoms in those treated by amidopyrin after the first twenty-four hours. It therefore seems to me that this drug acts as promptly in measles as quinine does in malaria, or the salicylates in rheumatic fever. A drug which checks the onward march of the symptoms, and particularly the development of the rash, surely has the right to be called a specific remedy.

The dose for adults is 12 grains three times a day, with or without Dover's powder to alleviate the cough. For children, I have employed the following formula:

$$\frac{(\text{age} + 1) \times \text{dose}}{24}$$

I never have seen any untoward effects from the drug, and so larger doses may be given if they seem indicated.

The following are my last seven consecutive cases treated as above.

Case 1.—D. F., a girl aged 9, felt ill on March 7th, 1924. Cough developed on March 9th. The following day her temperature was 104°. There was a typical roseola on face and neck. I gave amidopyrin 4½ grains, pulv. ipecac. co. 2 grains, thrice daily. On March 11th the temperature was 99.2°; the patient was free from pain and comfortable; rash scanty and pale on trunk and limbs. On March 12th the temperature was normal and the patient absolutely well.

Case 2.—B. C., a girl aged 3. Illness began on March 11th with cough, sneezing, and conjunctivitis. Probable diagnosis, measles. At 2 p.m. the following day the temperature was 100.8°, and there was a characteristic rash over the face and shoulders. She was given amidopyrin 1½ grains, pulv. ipecac. co. 3/4 grain, thrice daily. On March 13th, at 5 p.m., the temperature was 98.6°; the rash had not spread further and had faded. The child was comfortable and was playing when I saw her. Cough and conjunctivitis slight.

Case 3.—H. S., male, aged 22, came home from Blackpool on March 31st with a temperature of 101°. He was seen at 8 p.m. The upper half of the body was covered with thick, deeply coloured roseola; there was a very scanty rash on the extremities. He complained of a distressing feeling of suffocation. Koplik's spots were numerous, and he had severe cough and conjunctivitis. He was given amidopyrin 12 grains thrice daily. On April 1st, at 11 a.m., the temperature was 99.2°. The rash had not spread; he was free from pain and had slept through the night (after several sleepless nights) because "he did not have to keep his attention on his breathing." At 7 p.m. the temperature was 98°. The following day the rash on the face had

* Amidopyrin is recognized in the *British Pharmaceutical Codex* as a derivative of antipyrin. It was originally put on the market under the trade name "pyramidon."