

nose probably secondary to the empyæma. There is no doubt, however, that occlusion or stenosis of the ostium maxillare may lead to empyæma of the antrum. Caries, polypi, or granulation tissue in the middle meatus, purulent ethmoiditis, or even suppurative inflammation in the middle meatus may produce the morbid change in the antrum. This is not by direct extension of an inflammation by continuity, but from closure of the ostium maxillare and consequent retention of secretion or from some pus finding its way through the ostium when drainage from the middle meatus is not free. In the cases I have seen there was either the history of dental disease, or a diseased tooth was present. The roots of several teeth, notably the second bicuspid and first and second molars, are separated from the cavity of the antrum by a very thin layer of bone. Sometimes, indeed, the roots pass within the cavity, and are covered by a thin osseous film under the mucous membrane. It is also important to note that the size of the antrum varies considerably so that in exceptionally large cavities disease of the incisors, canines and posterior molars may be responsible for the empyæma. From these anatomical conditions it is easy to believe that there is a danger of extension of inflammation from around the teeth, or of septic matter or pus, flowing in.

Spencer Watson makes the statement that the general health is almost always at fault. I believe this, however, to be a purely local disease, dependent on local causes, though its long continuance may produce serious impairment of the health.

The pathology of the condition is simple enough. When pus is once present, and secreted in the antrum, it can never be completely removed except by artificial means. The ostium being high up on the inner wall, pus only flows out when it reaches that level, or when the head is in some particular position, but a residuum always remains on the floor and this becomes putrid or inspissated and increases the irritation till the whole lining of the cavity is involved.

Empyæma of the antrum appears under two clinical aspects:

1. Symptoms of tensions are present, due to stenosis of the ostium and retention of secretion,