ear is often affected at the same time that other diseases are present, and that there may be a causal relation between the two conditions. He is impressed with the fact that recent records show that of 600 children examined before and after death 80 per cent. were found to have a lesion of the middle ear. He states that though the middle ear may be inflamed and contain pus, the membrana often shows little or no alteration excepting a bulging at some point; it may or may not be infected. He believes that infection of the ear takes place from the nasopharynx through the Eustachian tube—*e. g.*, by water forced into this space in breathing and in the use of the nasal douche. He also maintains that spontaneous rupture of the membrana is the rule in otitis in adults, while in young children it is the exception. (This is probably due to the fact that in very young children the membrana is much thicker than in older ones.)

"The influence exerted upon the general system in cases of otitis media is greater in children than in the adult. Many children often lose their appetite and have other digestive disturbances which, if the trouble lasts long enough, end in general marasmus and death. Symptoms of some other trouble to which the ear affection may be secondary often mask the symptoms of the middle-ear inflammation entirely; again, the middle-ear trouble may run its course without affecting the general condition of the child." (The latter may be true of recognized ear disease characterized by a discharge—*i. e.*, by an external symptom—but the unrecognized, the unsuspected ear disease, is often the cause, not the effect, of loss of appetite, digestive disease, marasmus, and death.) Barth concludes by saying, "From what has been said of the frequency of middle-ear inflammations in children and of the *absence of symptoms* in many instances, we can conceive of the *rationalité* of a daily examination of the ears of all unwell infants from the beginning of their trouble to the end of convalescence. In the absence of otorrhœa there is no symptom by which inflammation of the middle ear can be recognized with any degree of certainty by the inexpert, so that the children are often treated for other infantile diseases when an *inspection* of the drum might have led to a diagnosis."

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF

F. B. MALLORY, M.D.,

ASSISTANT PROFESSOR OF PATHOLOGICAL ANATOMY, HARVARD UNIVERSITY.

On the Position of the Malignant Adenoma among Tumors.—HANSE-MANN (*Virchow's Archiv*, 1900, vol. clxi., p. 453) objects to the view recently expressed by Selberg, that the malignant adenoma is a special form of tumor, and advances the following line of argument in support of his objections:

Clinically the course of the malignant adenoma is exactly like that of the carcinoma. It can recur after extirpation; it can ulcerate. Left to itself it

has no physiological limit of growth, and it causes an increasing cachexia up to the time of death. The relation of this tumor to the carcinoma can be followed best in the adenomata of the colon, owing to the marked differentiation of the normal epithelium into beaker cells. In some destructive adenomata of the colon, beaker cells may occur in all parts of the growth. If metastases have occurred, beaker cells may or may not be present in them. If the tumor returns after extirpation, beaker cells may be present or absent. Such adenomata containing beaker cells show the least conceivable histological variation from the normal mucous membrane. But there are other malignant adenomata of the colon which from the beginning contain no beaker cells, and in which they never occur in the metastases or in the recurrences.

For a tumor to deserve the definition of the malignant adenoma, authors desire that the gland character shall be preserved, not only in the primary tumor but also in the recurrences and in the metastases. Such cases actually occur, but more often there occurs in the metastases and recurrences a gradual transformation to cylindrical cell carcinoma, or even to medullary or colloid carcinoma. The writer cites such a case. To this transformation or development in the character of the growth he applies the term "anaplasia," and he says that the possibility that the anaplasia in such a tumor may increase exists at all times in every malignant adenoma.

Although these relations between adenomata and carcinomata are less evident in other organs in which the cells are less differentiated, still they can be observed everywhere. There are malignant adenomata of such slight anaplasia that it is shown not in the form of their cells, but only in their course and in their manner of spreading. From these forms there are all possible transitions to the most anaplastic carcinomata; this variation is shown not only by comparison of different tumors with each other, but can be seen in different parts of the same tumor or in its recurrences and metastases.

Because occasionally tumors are found which retain the adenomatous structure in the primary tumor and in the metastases and recurrences, it must not be concluded that they must retain it under all circumstances. That would be the peculiarity of a special form of tumor, just as a carcinoma always remains a carcinoma and never becomes a sarcoma, or a lymphosarcoma never changes to a spindle-cell sarcoma; but a malignant adenoma can change at any time and in any place to a carcinoma, or, as the author expresses it, "increase in anaplasia."

To state the thought briefly, the destructive adenoma differs from the carcinoma not in principle, but in degree.

It is convenient to retain the names malignant adenoma, adenocarcinoma, etc., because they express more than the term carcinoma.

Hansemann's conclusion is that malignant adenomata distinguish themselves in no way from carcinomata, and do not deserve to be elevated to the position of an especial form of tumor. They are not co-ordinate with carcinomata, but subordinate.

Beside this discussion of the relation between malignant adenoma and carcinoma, the writer also treats at some length of the different varieties of the malignant adenoma and of the situations in which it is found.