BILATERAL POLYPOID HEMANGIOMA OF NASAL SEPTUM.*

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Before presenting the patient, I wish to say just a word as to the nature of the hemangiomata. Brooks, in his "General Special Pathology," gives probably the clearest description. They are divided into two general classes, angioma cavernosum and simplex. Cavernous angioma consists of numerous large, intimately connected blood spaces which occupy the position of the capillaries and merge into wide, tortuous and frequently sacculated veins. The size and form of the spaces is very variable. They are lined with delicate endothelium, and consists of a basement structure composed of ordinary connective tissue. In this are sometimes found also elastic fibres and smooth muscle. The tumors are of greater or less density according to the amount of this tissue present.

Angioma simplex (teleangiectasis) consists of wide, partly newly-formed capillaries, the walls of which are altered. The arteries and veins also may be involved, though the alteration of the capillaries predominates. Ordinarily it does not appear in tumor form, but as a diffuse, flat growth. This is the ordinary "port-wine" birth mark. The two forms are both usually congenital, and merge into each other without any sharp dividing line, while the cavernous angioma merges into the so-called erectile tissue.

In addition to these forms of true angioma, text-books on nose and throat diseases speak of the "bleeding septal polyp," springing from Kiesselbach's area, just below the center of the triangular cartilage of the septum. In these the numerous blood vessels, lined with simple endothelium and showing no muscular coat and but little adventitia proper, are small and lie in a stroma of very lowly organized connective tissue containing large numbers of leucocytes, including many lymphocytes, endothelioid and plasma cells. These seem to be a type of abortive granulation tissue or varix.

The tumor in the patient I wish to present is, as the microscopical description below and the accompanying microphotographs demonstrate, more closely allied to the group of

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angioma cavernosum. This, in its turn, is only slightly removed from erectile tissue, into which it imperceptibly fades.

The patient, Mrs. S. P., Russian, married, is the mother of two children, $2\frac{1}{2}$ and 4 years old respectively; no miscarriages. She was first seen at the clinic of the Manhattan Eye, Ear and Throat Hospital on May 6, 1916, complaining of crusting in her nose and severe frontal headache, unrelieved by glasses, from which she has suffered for the past five years or more. As she

Figure 1. Longitudinal section of one of the polypoid excrescences showing numerous blood vessels, base of attachment and purulent infiltration near surface. Magnified 30 diameters.

is a Russian Jewess and speaks little English the history was difficult to get and unreliable. On examination there was pus on the floor of the nose, in the middle meatus, and a slight flow of pus falling over the middle turbinate. That in the middle meatus was scant, dry and crusted. All the internal nasal structures presented the advanced grade of trophic characteristic of chronic sinus infection.

On both sides of the septum, at the junction of the crest of the vomer and the triangular cartilage, were a number of excrescences ranging in size from a pea down. These were pe-

dunculated, smooth, dark red in color and bled on the slightest touch. So far as these growths were concerned the history was negative.

Transillumination showed all the sinuses that could be reached free from shadows. The x-ray shows a thick membrane in the frontals and ethmoids, and granulations or pus in the left antrum. The Wassermann reaction was negative.

Some of the polypoid excrescences anteriorly on the right side were removed for microscopic examination with surprisingly little

Figure 2. Same magnified 160 diameters.

bleeding. Sections of this show a tissue containing large blood spaces with incompletely developed walls. These spaces are lined with a single layer of indefinite endothelium, and many of them have what appears to be smooth muscle and a poorly developed adventitia. In the central part of the nodes the intervacular space is filled with edematous areolar tissue with few cellular elements. Nearer the surface, where the epithelial covering is bathed with pus and there is a slow but continuous absorption of toxic material

there is a dense infiltration with leucocytes, among which are many lymphoid, endothelioid and plasma cells. This condition is so advanced in places that it approaches in appearance granulation tissue. The epithelium is everywhere intact, as is the basement membrane, although the latter is much thinned.

Diagnosis: Bilateral hemangioma of nasal septum, frontal sinusitis and ethmoiditis on the right, pan sinusitis on the left.

As to the treatment, the bilateral appearance of these polypoid growths is, in my opinion, evidence of their origin in the joint between the crest of the vomer and the triangular cartilage. To effect a cure it would seem to be necessary to obliterate this joint by a submucous resection. However, while caring for the surgically more important sinus infection, I shall probably try the cautery experimentally.

Before closing, I wish to answer one point of the discussion before it arises. That is as to the effect of the irritation of the sinus infection on the hemangioma. I believe that practically all hemangiomata are laid down during the embryological development of the body. There may be and probably is some further development during later life. They are essentially, however, congenital affairs. This view is strongly supported by the histological development of the present tumor. The central, morphologically older part of the polypoid mass is entirely free from evidence of irritation, and has blood spaces with some attempt at the formation of walls. Toward the surface, where chemical irritants may be absorbed, there is every evidence of secondary reaction.

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Importance of Bacillus Carriers in the Propagation of Diphtheria.

G. F. RUEDIGER, *Illinois Med. Jour.*, Oct., 1916.

The author concludes that bacillus carriers who have been recently exposed to diphtheria frequently transmit an infection to others which gives rise to clinical diphtheria although the carrier may never show any clinical symptoms of the disease. These temporary carriers are of greatest importance in keeping up an epidemic. Nose and throat cultures should be taken from every "contact" and all those who give a positive culture should be isolated.

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