of dnll pain referred to the left shonlder-joint. Upon inspection the left shoulder was seen to be flattened and upon a somewhat lower level than the right. The muscles of the left npper extremity, particnlarly of the npper arm, were decidedly atrophied; those of the scapnlar muscles were affected aimilarly, hut in slighter degree. The glenoid cavity of the scapula was palpable and appeared flat and empty; the acromial process was shorter and lower than usual. The upper extremity of the humerus could be felt distinctly helow the empty glenoid fossa; it was freely movahle and not larger, hut perhaps a little amaller, than the adjacent shaft. Nothing corresponding to the head of the hnmerus was appreciahle. The extremity of the hone was, however, distinctly rounded. This loss of the head of the humerus readily permitted the occurrence of Inxation beneath the coracoid process and into the axilla. Active movement in the joint was greatly restricted, while passive movement was not interfered with. All movement was free from pain. There were no osteoplastic deposits, neither in the glenoid cavity, nor in the capsnle of the joint, nor in the tendons or muscular attachments. The elhow-joint and the wrist-joint appeared to be normal, but the capsules of the joints of the fingers were too large and permitted of undue movement.

The Presence of Eosinophile Cells in the Blood.

Zappert (*Zeitschrift für klinische Medicin*, Band xxiii., Hefte 3 u. 4, p. 226), as the result of a large number of observations, has found that in otherwise healthy persons the number of eosinophile cells present in the blood fluctuates between 50 and 250 in the cubic millimetre. The upper limit is not infrequently exceeded and an increase to 700 or more is not an exceptional observation. In children a large nnmber of eosinophile cells is the rule. Sex, the existence of gravidity, and the occurrence of menstruation were not found to have any inflnence upon the number of eosinophile cells. In lenkæmia the absolute, but not the relative, number of eosinophile cells is increased; the percentage fluctuates between 2 and 6. Cases of chlorosis and profound anæmia are divisihle into two groups: one with the normal or an increased numher, and one with a diminished numher of eosinophile cells. This division, however, has no hearing upon the prognosis. In cases of cardiac disease no increase was found. Afehrile pulmonary tuberculosis is frequently attended with a diminution. In cases of bronchial asthma and pulmonary emphysema an increase takes place. Affections of the liver, excluding neoplasms, are also freqnently attended with an increase in the number. In cases of nephritis there is nn increase independently of the occurrence of uræmic symptoms. In the so-called functional neuroses the number is frequently increased, while in organic disease of the nervous system and in the psychoses the number, as a rule, remains normal. A large numher of diseases of the skin are characterized hy increase in the numher of eosinophile cells, varying with the character and intensity of the disease—the extent of distribution, however, being of hut secondary importance. It may he that the progressive cachexia attendant upon the presence of malignant neoplasms may cause a diminntion in the numher of eosinophile cells. A considerahle diminution takes place immediately hefore death. In case of

high fever the numher is frequently diminished; nfter defervesceace, however, it is not uacommoa for an increase to take place. This iacrease sometimes takes place duriag the fehrile period.

The Nature and Manifestations of Fever.

Hiller (*Zeitschrift für klin. Medicin*, Bd. xxiii., Heft 5, 6, p. 399), from a study of the nature and the maaifestations of the fehrile process, arrives at the coaclusioa that fever coasists essentially in an increase of heat-production as a result of some morhid process, and that the symptoms of the coaditioa arise from the altered relation hetween heat-productioa aad heat-dissipation; the hodily temperature rising whea productioa exceeds dissipatioa (fehris ascendens), remaining at the same level whea production and dissipatioa are equal (fehris coatiaua, the normal temperature ia health), and falliag whea dissipation exceeds production (fehris desceadens). The degree of heat-dissipation, which occurs principally through the skin, is determined hy the thermic seasihility of the cutaneous nerve-eadiags beneath the cpidermis. Both thermic seasihility and heat-dissipation vary in differeat parts of the body. The amouat of heat-dissipation is greater in parts not covered by hair or clothiag and directly exposed to the air, aad the thermic seasihility of the cutaaeous nerves is hy hahituntion considerably less. The subjective sease of heat or of cold is determined hy the thermic sensihility of the covered parts of the body, partly hy reason of the large extent of surface and partly by reason of the greater sensihility of the cutsaeous nerves of these parts. The cutaneous nerve-eadiags of the covered parts of the skin are from hirth accustomed to n certain degree of rapidity of heat-dissipatioa as a result of which there is a fairly constant differeace hetween the temperature of the hody (98.6°) and that of the clothiag (96.8°). This rapidity of heat-dissipatioa fluctuates within narrow limits, hears an intimate relation to the maintenance of the thermometric equilihrium, and gives rise to the feeling of thermic comfort in the skin. Every variation in the rapidity of this dissipation acts as an irritant (thermic irritatioa, comparahle to electric stimulation). Iacreased heat-dissipation gives rise to a feeliag of chilliness, dimiaished dissipatioa to n feeling of heat. The action of either stimulus is aatagonistic to that of its cause—in the one instsnce checking the increase, in the other augmeating it. Ia coasequeace of deficieat functional exercise of the unstriated muscular fihres this action is a slower one in the covered parts of the skin, aad ia consequence of the smaller numher of hloodvessels present the action is less pronouaced. In fever of asceading type the ascent of the cutsaeous temperaturc resulting from the elevation of the internal temperature occurs earlier than the elevation of the temperature of the clothing, as the dry epidermis is a poor conductor of heat, which it gives off almost solely hy radiatioa; the resulting increased rapidity of heat-dissipatioa gives rise to a chill. The more rapidly the internal temperature, and also the cutaneous temperature, rises, the more severe and more protracted is the rigor. In the same way ia fever of descendiag type, at times, in the crisis, the lowering of the iateraal temperature, and with it that of the skin, in consequence of the cessation of fehrile production of heat, takes place more rapidly than that of the hody-covering; the resalting progressive retardatioa of heat-dissipation

is attended with a feeling of heat and perspiration. After the febrile production of heat has reached its maximum a period is reached in which the difference between the temperature of the skin and that of the body-covering equals that which is present in health. The skin again feels comfortable. Any change in the existing degree of rapidity of heat-dissipation acts as an irritant. Probably the intensity of the irritation and the sensibility of the cutaneous nerves is greater as a result of the elevation of temperature. However this may be, the result is that heat-dissipation and heat-production become equal. The bodily temperature remains at the same level (febris continua). There is thus again established a condition of the thermometric equilibrium, as in health, with the difference, however, that heat-production and heat-dissipation are both greater. This condition of equilibrium is maintained as long as the heat-production (which depends upon the febrile disease-process) and the conditions for heat-dissipation (including the bed and the surrounding temperature) remain unchanged.

SURGERY.

UNDER THE CHARGE OF

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THE SECONDARY UNION OF PORTIONS OF SKIN REMOVED FROM THE BODY WITH THE ADJACENT FAT.

HIRSCHBERG (*Archiv für klin. Chir.*, 1893, Band xlvi., Heft 1) deals at great length with the historical portion of his subject, to support his theory that hyperæmia and a weakened condition of vasor tonus are the salient features in the success of transplanting unpediculated skin-grafts, containing the entire thickness of the skin, and also the underlying connective and adipose layers of tissue. He says of his method: "The secret, in my opinion, of transplantation lies in the use of portions of skin rich in vascular supply, and especially in an artificially produced hyperæmia." He reports four successful cases in which the operation performed was the following: While the defect to be filled is held under compresses by an assistant, the operator places an Esmarch bandage and tube on the uplifted arm. The bandage is removed after a few moments, the arm laid upon the operating-table, and the portion of skin to be transplanted is beaten for two or three minutes with a doubled-up small rubber drainage-tube; he then cuts out the three sides of the graft; through