

a bolus of "panacea of mercury 14 times sublimed, and select resin of scammony, each ten grains; of fresh and good gamboge six or seven grains in a conserve. To be taken twice, and washed down with one or two dishes of weak green tea, after which the patient must walk about his chamber."

The article entitled *Menses* could have justice done to it only by a paper on the bibliography of the whole subject from D Graaf and Boerhave down to Galabin, Playfair, and the late lamented Duncan.

Hypotheses of all kinds are suggested, some refused, others left *sub judice*; the influence of the moon, the supposed offending quality of the blood, the flux being regarded as an excretion, the need of extra blood supply in women for the exigencies of gestation, so that menstruation was the result of a plethora, "women having this plethora, and not men, because their bodies are more humid, and their vessels, especially the extremity of them, more tender, and their manner of living more inactive than of men; and that these things concurring are the occasion that women do not perspire sufficiently to carry off the superfluous alimentary parts till they be accumulated in such quantity as to distend the vessels and force their way through the capillary arteries of the uterus. It is supposed to happen to women more than to the females of other species, because of the erect posture of the former, and the vagina and other canals being perpendicular to the horizon, so that the pressure of the blood is directed towards their orifices; whereas in brutes they are parallel to the horizon and the pressure is wholly on the side of those vessels."

The chief opponents of the theory of plethora, maintained the theory of a special ferment, the famous De Graaf being one of the latter school. Some of them went so far as to say that the bile was the ferment in question, and explained the absence of the phenomena of menstruation in men on the ground that "the pores of the latter are more open and carry off more of the serous part of the blood, which is the vehicle of all the other humors." Their non-appearance in brutes is because of "the pores of these being manifestly more open than those of women, as appears from the quantity of hair which they bear, for the vegetation whereof a larger cavity, and a wider aper-

ture of the glands is necessary than where no such thing is produced."

The histology of the above would surely pluck any freshman guilty of it now-a-days.

## THE REPARATIVE PROCESS IN THE HEALING OF WOUNDS.

(Continued from Nov. Number.)

The epidermis also proliferates at the *rete malpighii*, and joins across the line of incision with a similar proliferation from the other side; microscopic section of the wound shows no clot, no fibrin (which glues surfaces together for the first twelve hours, or so, but is soon absorbed), but only a layer of fibro-blasts so delicate that frequently the microscope soon fails to detect any scar tissue at all. The old theory, that this rapid and complete union was due to microscopically accurate coaptation of parts, so that the severed capillaries returned, lumen to lumen, as before, and, as it were, fused together again, is, of course, quite untenable. The view that the connective tissue of the scar is of connective tissue origin, that is, that fibro-blasts are never formed from leucocytes, is fully in accord with the law of the specific nature of tissues, that no cells of any one of the three blastodermic layers can produce a tissue peculiar in origin to either of the other two. The process "essentially consists in a growing together of the two edges by the production of the requisite materials from the old tissues of the part." It is thus a reversion to the old embryonic type of tissue and method of growth—large, soft, round, nucleated masses of protoplasm in a state of rapid proliferation, which, being of connective tissue origin, cannot, according to the law of the specific nature of tissues, and our present theories of "embryological predestination," produce any but fibrous connective tissue; so that, in a scar, special tissue cannot be reproduced, but only cicatricial tissue formed.

1. *Healing by the First Intention*—Surfaces not so well coapted, but no suppuration, or putrefaction. A little lymph, or blood-clot, between them, which must be penetrated by the growing fibro-blasts, leaving cicatrix thicker than before, but still linear in section. Vessels are not needed, as in granulation tissue, and so, are not larger, or more numerous than normal, as in this form of union there is vascularity enough for nutrition of