

Surgery.

THE USE OF OXYGENATED WATER IN SURGERY—PEAN.

The researches of M.M. Paul Bert and Regnard on the effects of oxygenated water have induced Drs. Péan and Baldy of the St. Louis Hospital to investigate its applicability to surgery.

The oxygenated water made use of was prepared by Mr. Baldy, and was perfectly neutral and contained from two to twelve times its volume of oxygen, as required.

First of all it was applied externally for the dressing of great traumatisms and divers ulcers. It was also administered internally in certain diseases as anæmia, septicæmia, diabetes, tuberculosis, and more particularly tubercular operation cases.

Externally oxygenated water was applied by means of compresses of tarlatan, covered with sheets of oil silk to prevent evaporation, and retained with bandages. These applications were renewed once or twice a day according to the indications, also whenever there was a discharge requiring the use of a drainage tube, injections of oxygenated water were made at each dressing thro' the orifices of these tubes, until the fluid returned clear and frothing.

So far the results have proved most satisfactory—they have been favourable not only in the minor amputations and resections which are daily performed in an important service such as that of M. Péan at the St Louis, but even in the great amputations of limbs (thigh, leg, arm, and fore-arm). Oxygenated water has also been applied after the ablation of large tumours whether taken from the soft parts or the hard parts of the limbs and from the trunk, in incisions of multiple, long and deep fistulous tracts, and in grave accidental wounds complicated with severe lacerations. Throughout the entire period of the dressings, the atmosphere of the wounds has been modified by vaporisations of oxygenated water.

Under the influence of these applications, the wounds, those recently made with bistoury or thermo-cautery, as well as those of older date, covered with sphacelated portions which

had induced a certain degree of lymphangitis or erysipelas, have quickly assumed a healthy aspect and become covered with rosy granulations, which have furnished a pus relatively abundant, but creamy and without odour. There had been exceptions at first only in those covered with sphacelated portions, and even in these cases the odour appeared less than with dressings made with other substances. We have also noted a favourable tendency towards union by first intention of amputation wounds and rapid cicatrizations of old wounds and chronic ulcers.

At the same time in patients who had been treated by other methods and who were threatened with septicæmia, at the moment we began these dressings we began its internal administration.

The effects have appeared to us most satisfactory, not only in view of the local condition but as regards the general state. The fever which is declared after great traumatisms has been moderated, most often at the end of three to four days it has completely subsided and we have been struck with the slight elevation of pulse and temperature.

All these results have appeared at the least as satisfactory, if not more so, as those from alcohol simple or camphorated and carbolic acid. In this respect should we not prefer the oxygenated water to the last since it has neither the toxic properties nor the vile odour of carbolic acid.

As to tubercular ulcerations they have been happily modified. In epithelial or sarcomatous ulcerations this mode of dressing has not been sufficiently tried to base an opinion of its definitive action. But there is reason for thinking that it may produce some modification.

We now replace the carbolic spray with oxygenated spray in all large operations such as gastrotomy.—*Gaz. des Hôp.*

Dr. Gustav Krehbiel, (in *Wien. Med. Woch.*) records the case of a man, aged 54, who was shot through the hand. The wound was washed with a 5% solution of carbolic acid. The canal formed by the bullet was then filled with iodoform. Healing took place with scarcely a trace of inflammation.