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THE VALUE OF MILITARY SURGERY IN CIVILIAN PRACTICE - RESULTS OF ANOCIATION IN REDUCING MORTALITY.

In addressing the 73rd Annual Meeting of the Ohio State Medical Association, (Journal O.S.M.A., September 1919, p. 541) George W. Crile of Cleveland emphasized the value of Anociation in reducing operative mortality.

"The Interallied Surgical Conference", said Dr. Crile, "adopted as one of its conclusions that in the treatment of wounded soldiers the anaesthetic of choice is nitrous oxide-oxygen combined with local anaesthesia. Among the evidence offered in support of this tenet Surgeon-General Sir Anthony Bowlby presented the work of one of the most brilliant British military surgeons, Captain Douglas C. Taylor, and the work of the Chief of the Anaesthetic Service of the British Army, Captain Gregory Marshall. The experience of Captain Taylor I am privileged to quote. He has summed it up as follows: 'Until the summer of 1917 my colleague, Captain G. Marshall invariably gave ether for my laparotomies for gun-shot wounds of the abdomen. No series of 100 consecutive cases showed a recovery rate of much over 50 per cent.

"During the summer and autumn of 1917, I did 101 laparotomies for abdominal wounds, and nearly half of them were given nitrous oxide and oxygen combined with infiltration of the abdominal wall with eucain and novocain. The more serious cases, i.e., those with rapid pulse and low pressure were nearly all done by this method.

"Of this series, 27 died at the Casualty Clearing Station, and 74 were evacuated to the Base; of the latter there have been only two deaths, both from secondary hemorrhage - one from the kidney and the other from the rectum and buttock."

That is, by the employment of anociation, Captain Taylor's mortality rate was reduced from approximately 50 per cent to 29 per cent.

Captain Marshall has demonstrated that patients may apparently do well during ether anaesthesia but do badly afterward, while they do well both during and after nitrous oxide-oxygen anaesthesia.

The experience on a large scale of the resuscitation teams from the Lakeside Unit which served continuously throughout Field Marshall Haig's great offensives in Flanders in 1917, during which there were over 800,000 casualties, showed that in abdominal operations somewhat better results were obtained if, before the beginning of the operation sufficient blood were transfused to permit a safe performance of the operation; and again ^{at} the completion of the operation an ample amount of blood up to 750 c.c. were given. Furthermore, if a let-down appeared later, the transfusion might be repeated. Meanwhile the advantages of comfort, rest, warmth, morphia and fluids were added.

The advantages of the nerve-blocking are further emphasized by Colonel Cabot's series of 180 amputations of the thigh, one-half under ether, and one half under spinal anaesthesia with a reduction of mortality by the use of spinal anaesthesia of 50 per cent; while Captain Taylor by the use of nitrous oxid -oxygen reduced his mortality rate for thigh amputations more than 200 per cent.

A NOTE ON THE VALUE OF NITROUS OXID -OXYGEN ANAESTHESIA IN WAR SURGERY.

Reporting to the Southern Medical Association on his experiences with anaesthesia in war surgery, Dr. Addison G. Prenizer, of Charlotte, North Carolina, formerly Chief of Surgical Service, Base Hospital No. 6, A.E.F., says that nitrous oxid-oxygen was used only between September 10 and November 14, 1918, not that the surgical staff did not prefer it, but because the Unit was late in receiving its apparatus and was not able to

secure more gas when the first supply was exhausted.

Publishing his observations (Southern Medical Journal, October 1919) Prenizer explains that:

"During the 65 days period anaesthesias were given as follows:

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|------------------------|-----------|
| Ether | 473 |
| Nitrous Oxid-Oxygen .. | 341 |
| Local | 87 |
| Chloroform | 7 |
| | <hr/> 908 |

"We have used ether overwhelmingly over other anaesthetics, quite a number of infiltration anaesthesias with novocaine and cocaine and but little chloroform. We have rarely used ethyl chlorid as a general anaesthetic, but have used it locally for small incisions. There was but one death we could attribute to an anaesthetic and that was a death from chloroform in unskilled hands.

"The tranquillity of the patient, the rapidity and ease of induction, the rapidity of recovery and the safety withal gives nitrous oxid-oxygen quite an advantage over the other anaesthetics in the first and second stages of anaesthesia especially in cases where an absolute muscular relaxation is not needed. Even when ether is superimposed for deeper anaesthesia, the amount is reduced to a minimum to maintain the period of relaxation.

The types of cases where gas-oxygen is most valuable are:

1. Shock cases.
2. Cases where operation is to be of short duration.
3. Cases where the condition is profoundly bad and the post-operative period treacherous.
4. Chest cases, with the exception of those liable to show hemorrhage, and
5. Infection of the respiratory tract.

Gas-oxygen is of great value in war surgery since the greater number of delayed primary and secondary suture of wounds can be made with the use of this anaesthetic alone.

The special advantages of gas-oxygen in war surgery are: