

OPERATIONS ON PATIENTS WITH A HEMOGLOBIN OF FORTY PER CENT OR LESS¹

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SEVERAL months ago our worthy secretary, Dr. LeRoy Broun, asked me if I would not look up for this meeting our operative results in cases with a low hæmoglobin. We have examined the cases of the gynecological department of the Johns Hopkins Hospital from 1889 to 1912 and have found records of about 170 cases in which the hæmoglobin was 40 per cent. or below. This, however, by no means represents the total number. In the early days the hæmoglobin estimate was not made as a routine procedure, and from time to time since an occasional omission has occurred. The figures are, however, fairly accurate. I have decided on 40 per cent. as a convenient arbitrary percentage. We are all familiar with the fact that many patients with less than 40 per cent. of hæmoglobin pass through an operation very satisfactorily, but in any case in which the percentage is 40 or less the operator naturally has a certain amount of anxiety. In our group are included a few cases which for various reasons were not operated upon.

Dr. Benjamin O. McCleary has been of the greatest assistance to me in obtaining the necessary data and I gladly acknowledge my indebtedness to him.

For the purpose of convenience I shall divide the cases into two main groups:

1. Patients that recovered.
2. Patients that died.

CAUSES OF THE LOW HÆMOGLOBIN IN THE PATIENTS THAT RECOVERED

Uterine myomata were associated with a low hæmoglobin in 42 cases. As is well known, the position of the myoma is responsible for the bleeding. A myoma may reach very large proportions without occasioning any loss of blood provided it does not in any way encroach on the uterine cavity. On the other hand a submucous myoma not over 1 or 2

cm. in diameter may cause alarming hæmorrhage. Accordingly it is the submucous myomata that are responsible for the very low hæmoglobin.

UTERINE MYOMA

| Gyn. No. | Per cent. | Gyn. No. | Per cent. | Gyn. No. | Per cent. |
|-------------------|-----------|-------------------|-----------|--------------------|-----------|
| 6002 | 24 | 9638 | 21 | 10618 | 40 |
| 7313 | 38 | 9678 | 23 | 11077 | 22 |
| 7438 | 19 | 9707 | 26 | 11139 | 25 |
| 7615 | 39 | 9738 | 30 | 11743 | 23 |
| 7934 | 40 | 9780 ¹ | 20 | 11880 ¹ | 14 |
| 8130 | 28 | 10172 | 29 | 12086 | 40 |
| 8634 | 33 | 10287 | 35 | 12234 | 25 |
| 8949 ² | 15 | 10301 | 35 | 12257 ³ | 40 |
| 9070 ⁴ | 35 | 10376 | 39 | 12890 | 25 |
| 8951 | 33 | 10455 | 49 | 14247 | 30 |
| 9953 | 35 | 10502 | 35 | 14458 | 20 |
| 9201 | 22 | 10573 | 38 | 16001 | 40 |
| 9593 | 10 | 10597 | 25 | 16405 | 15 |
| 9920 | 23 | 10605 | 30 | 18185 | 25 |

¹No operation. ²Tubo-ovarian abscess. ³Infected. ⁴Sloughing.

Hyperplasia of the endometrium was the cause of the low hæmoglobin in 23 cases. This condition is a definite pathological entity that as yet has not been accorded the recognition it deserves. The endometrium presents a most characteristic picture. The mucosa is thicker than usual. The surface may be perfectly smooth or there may be little polypoid outgrowths projecting from the surface. Many of the uterine glands are small and circular on cross section; others are larger and still circular; not a few are at least ten times as large as normal and are somewhat irregular. The glands, whether large or small, have a much higher epithelium than normal and many of them are apparently lined with two, or three layers of epithelium. The stroma is much more cellular than usual and its cells frequently contain nuclear figures. The veins in the stroma are often much dilated forming sinuses, which at times are partly or completely filled with organizing thrombi.

Given such a condition one can supply a relatively accurate clinical picture of the patient. She is usually between 35 and 45

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