A CASE OF AGRANULOCYTIC ANGINA

BY

A. DALY BRISCOE, M.A., M.B., B.CHIR.

Only five cases (all in females and four fatal) of agranulocytic angina have been reported in this country. In America and on the Continent, however, many cases have been investigated, and much has been written on the subject. By far the majority of patients have been females, and the mortality has been very high. Batten¹ was the first to record a case in England, and subsequent cases have been reported by Garrod and Williams,² Pilkington,³ Leys,⁴ and Abrahams.⁵ It appeared, therefore, that a case occurring in a man of 71, with subsequent recovery, was sufficiently unusual to be worth putting on record.

History of Case

The patient, a small, spare man, aged 71 years, had not felt well since June, 1933. He complained of feeling easily tired, of being irritable, and of having a poor appetite. The only previous history of any importance was an attack of renal colic six years before, which was followed by the passage per urethram of a small calculus.

He was first seen on August 31st, 1933. In addition to the symptoms mentioned above he had some difficulty and pain in swallowing, owing to an ulcer which was situated on the left side of his tongue in its posterior third. This was oval in shape and covered with a whitish slough. Its edge was not hard or indurated. There were no enlarged glands to be felt. All his teeth had been extracted some years before, and he was a non-smoker. He stated that his tongue had been sore for a few days. He continued at work for two days, but felt progressively poorly, and took to his bed on September 3rd, 1933. He was seen on the next day, when he had developed painful haemorrhoids, of which he had had previous attacks, and complained of pain on passing urine.

Digital examination of the rectum, which proved very painful, revealed a large, tender prostate. The urine was markedly acid, but no albumin or sugar was found; there was no deposit. The ulcer on the tongue was more painful, and there was considerable dysphagia, but the appearance of the ulcer was little altered. There was, however, some cedematous swelling around it, but not to any great extent. The painful micturition increased in intensity during the next two days, and the pain on defaecation was also aggravated. These symptoms now became the prominent features of the case, and proved more troublesome to the patient than the condition of his mouth.

On September 6th the temperature rose to 101.4° F. at 9 p.m., having been normal that morning. On September 8th there was some aphthous ulceration of the upper lip, and he was obviously feeling weaker, but his chief discomfort was that of frequent and painful micturition, and the haemorrhoids were still swollen and inflamed. The ulcer on the tongue did not appear to be any larger, but the slough appeared more "dirty." There was a slight icteric tinge of the sclerotics, but no enlargement of the liver was felt. The spleen was not palpable. There was no evidence clinically of any anaemia. The blood pressure was 116/70.

By September 10th the patient was much weaker, and with the continued fever it was felt there might be some obscure sepsis somewhere. A leucocyte count was done, but instead of a suspected leucocytosis a very marked leucopenia was found—370 per c.mm. It then became apparent that this might be a case of agranulocytic angina, and a blood film examined on the following day showed only 4 per cent. of polymorphs present, and the provisional diagnosis was confirmed. (The blood urea was 21 mg. per 100 c.cm.: this was done in view of the previous history of renal calculus.) Micturition continued to be painful, but no ulceration at the urethral meatus was discoverable, nor was there any anal ulceration, but the possibility of rectal ulceration could not be excluded. Insomnia was troublesome. At no time was the pulse raised above 100; more often it was 84 to 88, even when the temperature was in the region of 101°. The highest temperature recorded was 101.4°.

Blood Counts

The full pathological report on the blood film of September 11th was as follows: "The red cells appear normal, and there are platelets present. There are no abnormal white cells, but a differential count gives the following result, which shows a very marked polymorphonuclear leucopenia: polymorphonuclears, 4 per cent.; lymphocytes, 86 per cent.; monocytes, 10 per cent." A swab was taken of the ulcer, and on culture gave a moderate growth of haemolytic *Streptococcus longus*, with an occasional colony of *Staphylococcus albus*. On September 12th the tongue ulcer was definitely clearer, and the patient was certainly no worse.

On the next day a small quantity of dirty-looking material was discharged from the left nostril, and the patient then said that for two days his left nostril had been uncomfortable and slightly tender. On this date further blood films were examined, and the report was: "Red cells normal in size, shape, and colour; white cells similarly normal. A differential count, however, shows the condition to be very much the same as before: polymorphs, 5 per cent.; lymphocytes, 87 per cent.; monocytes, 8 per cent." From now onwards his condition slowly but steadily improved. The tongue showed signs of definite improvement each day. On September 14th the temperature was below 99° for the first time since September 6th.

On September 15th the differential count was: polymorphs, 17 per cent.; lymphocytes, 74 per cent.; mononuclears, 9 per cent.; no basophils or eosinophils. The next day the total white cell count was 1,800 per c.mm. The patient was now much better. The painful micturition was easier, and the haemorrhoids were subsiding. The tongue ulcer had cast its slough completely, leaving a clean base. From now on his progress was uninterrupted. The tongue ulcer healed rapidly. The slight superficial ulceration of the upper lip was quite healed by September 18th. A differential count three days later showed: polymorphs, 54.5 per cent.; lymphocytes, 38 per cent.; mononuclears, 7 per cent.; basophils, 0.5 per cent.; eosinophils, nil. He had now no complaints at all, and looked much better. He was able to get up on September 30th.

The blood was finally examined on October 7th and the following complete report made: red cells, 6,200,000 per c.mm.; haemoglobin, 86 per cent.; mean diameter, 7.4 μ ; colour index, 0.6; white cells, 5,700 per c.mm.—polymorphs 64 per cent., lymphocytes 31 per cent., mononuclears 4 per cent., eosinophils 1 per cent. This confirmed haematologically his complete recovery clinically.

During the succeeding six months this patient has kept well, and on April 6th, 1934, the following report on a blood film was received: "The red cells are of good colour, shape, and size. White cells are not seriously diminished. Differential count: polymorphs, 66.6 per cent.; lymphocytes, 28 per cent.; mononuclears, 4 per cent.; eosinophils, 1.2 per cent.; basophils, 0.2 per cent." There were no sequelae.

Comment

No specific therapy was employed. Blood transfusion was considered, but owing to its doubtful value was not carried out. Treatment by x rays has not been universally successful, and was not used, nor were injections of pentose nucleotide 96 or of sodium nucleinate given. There was never any ulceration of the pharynx or fauces. The ulcer on the tongue did not spread. The ulceration of the upper lip was quite superficial. There was evidently some ulceration of the nasal mucous membrane, and, although not certain, ulceration of the rectum and urethra was probable.

The points of special interest in the case are: (1) the fairly long prodromal period of slight ill-health; (2) that the patient was a male; (3) that his age was 71; (4) that the total leucocyte count fell to 370 per c.mm.; (5) that recovery was complete; (6) the high percentage of monocytes, which, according to Conner *et al.*,⁶ indicates a more favourable prognosis; (7) that the fever lasted seven days, which is the most usual time, according to Jackson *et al.*⁷

Conclusion

There was no apparent cause, and this case must be considered as primary or idiopathic agranulocytic angina.

It would appear that in any case of ulceration of the mouth, tongue, fauces, or any other mucous membrane without definite cause, yet with severe constitutional disturbance, an examination of the blood should be carried out to exclude the possibility of agranulocytic angina.

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REFERENCES

- ¹ Batten: *Lancet*, 1929, i, 440.
- ² Garrod and Williams: *Ibid.*, 1931, i, 469.
- ³ Pilkington: *Ibid.*, 1932, i, 1307.
- ⁴ Leys: *Ibid.*, 1933, i, 750.
- ⁵ Abrahams: *Ibid.*, 1933, i, 1068.
- ⁶ Conner, Margolis, Birkeland, and Sharp: *Arch. Int. Med.*, 1932, xlix, 123.
- ⁷ Jackson, Parker, and Taylor: *Amer. Journ. Med. Sci.*, 1932, clxxxiv, 297.

FULL-TERM EXTRAUTERINE PREGNANCY WITH LIVING CHILD

BY

W. ARKLAY STEEL, M.D. ST. AND., M.R.C.P. LOND.
HILLINGDON COUNTY HOSPITAL, UXBRIDGE

The recent publication of a very interesting article with a case report of full-term ectopic gestation¹ prompts the record of a similar case which occurred in the practice of Redhill County Hospital. This simulated a normal pregnancy so closely that at no time was the possibility of an ectopic gestation considered, although in the light of later knowledge the latter diagnosis should have suggested itself at the time of the patient's first attendance at hospital. The patient attended on several occasions over a period of four months.

Clinical History of Case

M. C., primipara, aged 24 years, was admitted to Redhill County Hospital, Edgware, on April 5th, 1932. At the age of 14 years she was operated upon for appendicitis, and was afterwards troubled with a ventral hernia, which developed in the operation scar. Each menstrual period was preceded by pain and a slight vaginal discharge. Her last menstrual period commenced on October 23rd, 1932.

Three weeks prior to her admission to hospital she had an attack of severe pain in the abdomen. She was impressed by the suddenness of the onset of the pain, which, she stated, occurred in the lower part of the abdomen, being much more severe on the right than on the left side. This severe pain, which lasted for about a day and then gradually diminished in intensity, was associated with a slight pain in both shoulders; she herself described it as "sharp" and "like twisting knives." Following this attack there had been a vaginal discharge, which after a fortnight diminished in amount.

When admitted to hospital she described the pain as being much less severe and of a dragging nature, but added that the act of micturition was accompanied by pain. She was extremely nervous and apprehensive of examination. The temperature was 98° F., pulse 86, respirations 24. The bowels were regular. A centrally situated tumour reaching to the umbilicus was regarded as the uterus enlarged to the period of cyesis. Tenderness was present over the whole abdomen, but was most marked in the iliac fossae. The presence of this tumour was confirmed by vaginal examination. The cervix was soft and the external os closed. There was tenderness in

the right and left fornices. The fundus of the uterus could not be defined from the tumour, which filled the pelvis and reached into the abdomen. A catheter specimen of the urine showed no abnormality. She was discharged from hospital on April 14th, 1932, having been then for some days entirely free from symptoms.

The patient reported at the ante-natal clinic on May 9th, 1932, and thereafter attended on three occasions prior to her readmission to hospital on July 29th, 1932. A radiogram taken on July 16th showed the foetus had assumed the transverse position. The head was lying in the left iliac fossa. Attempts at external version failed to alter this, and the position was maintained until August 9th, when it was decided to attempt external version under anaesthesia.

In contrast to the difficulty experienced in previous attempts at version, the head was very readily moved and maintained in the vertex position. As the head commenced to turn it was noted that a definite "snap" was conveyed to the palpating hand. The head was floating well above the brim of the pelvis. A vaginal examination was carried out, and a large placenta was felt occupying the entire pelvis. It was seen at once that the patient's condition had become worse, and the anaesthetic was immediately discontinued. She became very blanched and extremely shocked. When conscious she complained of severe abdominal pain. It was thought that the uterus had been ruptured, and an operation was immediately carried out under chloroform and ether anaesthesia.

Operation

The abdomen was opened by a midline incision. The abdominal cavity was found to be full of blood. A living female child was extracted. The umbilical cord was cut between ligatures. A normal uterus was then palpated and seen lying anterior to the placenta, which swayed at the end of a strap-like pedicle. This pedicle was from 3 to 4 inches broad, and was attached to the posterior aspect of the right broad ligament. As large blood vessels were seen coursing through the pedicle, it was accordingly severed between clamps and the stump ligatured with catgut. A thick-walled, ruptured sac was adherent to the coils of the small bowel and also to the omentum. The sac was readily separated, and very little of it had to be left behind owing to its persistent adhesion. The patient's condition was extremely precarious. A pint of the blood which had been sucked out of the peritoneal cavity during the course of the operation was given to her intravenously. Thereafter her condition rapidly improved, and undoubtedly this case marks a further illustration of the life-saving value of auto-transfusion of blood. The convalescence was uneventful, and she was discharged on September 7th, 1933. She was examined again on May 7th, 1934—that is, twenty months after her operation, when she stated that menstruation was in every way normal. At no time since the operation had she experienced any pain or discomfort.

After the operation the child showed signs of shock but rallied with treatment. Her colour was then good, and she seemed apparently healthy. Unfortunately the child died suddenly twelve hours after birth.

Post-mortem Findings

A necropsy was carried out on the body of the child, and the following details were noted:

Length of child	...	...	17½ inches
Weight of child	...	...	6 lb. 11 oz.

Although a careful examination was made, no abnormality or deformity was found. Sections of different parts of the skeleton were reported on as follows:

"The sternum shows centres of ossification in the manubrium and three centres in the body. Ossification is commencing in the lower end of the femur in the lower epiphysis. The epiphysis at the upper end of the tibia shows no sign of ossification. The placenta weighs 3 lb., is fully formed, and measures 8 inches in diameter. It appears to be perfectly normal, except for the thickness of the membranes attached to it."