motor disturbance has occurred, such as paraplegia, retention of urine, or loss of control of the sphincters. For the most part these symptoms have passed off after some hours or days; in a few of the cases a greater or less degree of disability has persisted. Silverstein's patient, a tabetic, was left with complete motor and sensory paralysis of the leg, but in this case an unusually large dose of alcohol (9 c.cm.) was given. In Sloane's patient, also a tabetic, there was retention of urine and faeces, abolition of the ankle-jerk and paresis of the muscles of the lower leg on both sides—more pronounced on the side of the injection—and anaesthesia of the back of the thigh and leg and of the peri-anal region, complete on the side of the injection and partial on the opposite side; a certain degree of weakness of the legs and difficulty with micturition was permanent. Babcock also observed persistent weakness of the leg. In one of Todd's cases a meningeal reaction occurred, but this subsided spontaneously in four days. One death has so far been reported—by Abbott, in a patient in the last stages of malignant disease who died the day following the injection. Russell's series of twenty-five cases included one case of retention of urine and three cases of sphincter paralysis; and among Todd's eighteen cases retention of urine and incontinence of faeces occurred in two and incontinence of faeces alone in one. In all these cases, and in others reported in the literature, recovery took place within a few days. The longest time taken for recovery from these sphincter disturbances has so far been two weeks. One case of diarrhoea lasting three weeks has been reported (Greenhill and Schmitz).

The comparative rarity of motor disturbances after subarachnoid injection is probably due in part to the relative insensitivity to alcohol of motor as compared with sensory fibres; it is difficult otherwise to understand why these disturbances do not more often accompany injections given in the region of the cauda equina.

One case may be added to those collected from the literature. This patient, a woman of 57, was suffering from intense pain in the right side of the abdomen associated with generalized melanotic disease of the liver, secondary to a malignant melanoma of the choroid for which the right eye had been removed five years before; the pain was constant and relieved by morphine only to a very slight extent and for an hour or two at a time; she was worn out from lack of sleep. The diagnosis having been confirmed by exploratory laparotomy and biopsy, 10 minims of 95 per cent. alcohol were injected through the seventh dorsal interspace. The injection was wholly unsuccessful. It was therefore repeated a week later, the dose being increased to 20 minims. This time relief was immediate and complete. Neither injection was followed by complications of any kind.

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THE EFFECT OF IRON ADMINISTRATION IN CASES OF SUBNUTRITION

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It is a pity that medical officers in charge of a welfare centre under the control of a local authority do not more often publish their experience at the centres. The number of children attending is usually large and the work done excellent, but the amount of literature relating to these clinics is much too small. One realizes that the difficulties of research work are many, the greatest of them being the lack of co-operation from parents. Numerous plans are conceived and much work started; but the result is *nil*, as parents will not bring their children along for examination often enough, and so results that are promising cannot be put in the tabulated form necessary for publication. This is a great loss to the general practitioner, who often has little chance of obtaining experience in the pathology or even the physiology of infant life during his first few years of practice. The following work was carried out partly at a toddlers' clinic (children from 1 to 5 years old) and partly at the laboratory, both under the control of a local authority (county borough, population 150,000). For reasons already mentioned the figures were not nearly so complete as one would desire, but they are of value as showing a positive result from a simple and cheap form of therapy for a certain defect prevalent among children in the poorer-class districts of many boroughs.

At the clinic under consideration the children attending belonged to families whose chief breadwinner was often unemployed for long periods, and whose food was therefore mostly of the cheap variety. The proteins necessary for adequate growth were seldom present in the daily menu. The children's food consisted in the usual energy-producing carbohydrates, mostly in the form of wheat of different millings made edible by the addition of animal or vegetable fat. During the summer first-class proteins such as eggs, fish, and meat could be bought, but in the winter, when these foods were most necessary, they were often lacking, and malnutrition therefore followed.

Many of the children attending the centre had pale mucosae, and showed lack of energy, anorexia, subnutrition, and dullness of spirit. It was decided to try the effect of the addition of iron to their diet, unaided by anything else that might cause a diminution in the existing subnutrition. The children were chosen and sent to the laboratory, where complete blood examinations (cell count, films, and haemoglobin estimation) were carried out. In order to reduce the passive opposition of the parent this blood examination was made only at the first attendance, subsequent investigation being confined to estimation of the percentage of haemoglobin. In this way we could eliminate those children who were not actually anaemic though appearing so on clinical examination. All the children selected, however, were anaemic both on clinical and on biological grounds.

The parents were not advised regarding diet, but were merely given a bottle of ferri et ammon. cit., to be taken by the children once daily in any form of food. The first

advice to a new parent attending the clinic is in regard to a balanced dietary, but with the children under consideration this was avoided in order to demonstrate the effect of the addition of iron to their normal meals. After a course of iron appetites improved, the mucous surfaces became less pale, and the children became more active and showed an increased vitality generally.

It will be noted from the tabulated results given below that there was a definite rise in the percentage of haemoglobin. From the clinical improvement noted in the children this was expected. In order to avoid giving a detailed account of the rise in the percentage of haemoglobin and the blood pictures obtained from each child, a table is appended to show the average rise in haemoglobin over the series of children who attended weekly for examination. The blood picture is the average for thirty-one children, but since the attendance for examination diminished each week, owing to ailments and lack of co-operation from parents, the results given at the end of the sixth week are completed from a smaller number. Clinically, however, all the children maintained their immense improvement in health and general activity while taking a daily dose of iron. Considering that the iron cost the parent only 1½d. per week one feels it to be worthy of trial in any case where a child shows a lack of normal vitality. Had advice regarding diet been given in conjunction with the addition of iron to the food we could have obtained a more pronounced rise in the haemoglobin percentage and a greater improvement in the general health of the children. It is gratifying to note that some firms who market dried full-cream milk are now adding an adequate dose of iron to the food, and not the small amount so often met with a few years ago, an amount which would fail to give any satisfactory rise in haemoglobin.

Table showing the Blood Picture before giving Iron to Thirty-one Children (Average Age, 2½ Years)

Average number of red blood cells per c.mm.	..	3,840,000
Average percentage of haemoglobin	..	66
Percentage showing anisocytosis	..	84
" " pallor	..	35
" " poikilocytosis	..	16
" " polychromatophilia	..	7
" " punctate basophilia	..	3

Conclusion

Many of the children attending a toddlers' or infant clinic under the direction of a local authority show a clinical anaemia (confirmed by blood pictures) although no definite defect appears to be present, apart from sub-nutrition and pale mucous surfaces. These children should be given a regular daily dose of iron over a period of at least six to eight weeks, even though they are getting insufficient food. If their blood picture does not show an improvement further investigation will be necessary. Where the clinical finding fails to suggest a physical defect the administration of a course of iron on empirical grounds will often save much further investigation of a more difficult nature.

Table showing the Average Percentage of Haemoglobin at the End of Each Successive Week while taking a Daily Dose of 20 grains of Ferri et Ammon. Cit.

Before taking Iron	Weeks After taking Iron					
	1	2	3	4	5	6
66.6	66.6	69.5	73.7	74.7	75.9	78.0

Summary

1. The average blood picture of thirty-one children under the age of 5 years (average age 2½ years) is given, showing signs of anaemia clinically.

2. A table is included to demonstrate the effect of a simple addition of iron to children's diet, which is left unchanged in other respects.

3. These children were chosen from a welfare centre in a poor-class district in Birkenhead, where unemployment is prevalent.

4. The cost to the parent per child per week amounted to 1½d. for the ferri et ammon. cit.

5. No advice was given to parents regarding diet for children.

We wish to thank Dr. D. Morley Mathieson, Medical Officer of Health, Birkenhead, for granting us the facilities for carrying out this work.

Clinical Memoranda

Block Anaesthesia for Insertion of Radium to Epithelioma of Lip

(WITH SPECIAL PLATE)

The use of block or local anaesthesia, either alone or combined with gas and oxygen or any other general anaesthetic, often seems to be neglected, perhaps through lack of opportunity or from prejudice on the part of the patient, the anaesthetist, or the surgeon. The following account appears to be worthy of record as illustrating the indispensable use of block anaesthesia in a case which presented considerable difficulty with regard to the anaesthetic.

The patient, a man of 77, was suffering from an extensive epithelioma of the lower lip. The growth involved the left corner of the mouth and extended along the lower lip to within half an inch of the right corner. The patient was frail and quite unsuitable for a general anaesthetic, and had given cause for great anxiety when under gas and oxygen for the extraction of teeth. The intravenous barbiturates were out of the question in view of the patient's age and general condition, so local anaesthesia seemed to be the method indicated. Local infiltration is not ideal for radium cases, as the ensuing soggy tissue of the tissues, added to the reaction of the radium itself, is apt to cause more sloughing than is usual. The only solution appeared to be in block anaesthesia sufficiently far away to leave the operation site untouched.

An hour before operation the patient was given one-sixth grain of morphine and 1/150 grain of hyoscine, and fifteen minutes before operation a right and left mandibular injection by the indirect method, 2 c.cm. of anaesthetic fluid being injected at each inferior dental foramen. To anaesthetize the left corner of the mouth the infra-orbital nerve was dealt with by the deposition of 2 c.cm. of anaesthetic fluid at the left infra-orbital foramen and gently massaged upwards. On being questioned the patient now said that his lower lip was tingling and he was unable to feel the prick of a needle, proving that the mandibular injections were working efficiently. Each of the long buccal nerves was injected with 1/2 c.cm. to anaesthetize the mucous lining of the lip. All these injections were of course given inside the mouth. The patient's eyes were then bandaged and he was taken into the theatre, the towels placed in position, and the lip prepared. After the insertion of the first radium needle the patient fell asleep, and remained asleep and snoring until roused by the removal