rehabilitation as soldiers, which is the aim of military prisons.

Finally, these findings would appear to reflect on a small scale the problem of the disposal and reform of the psychopath generally. Clearly law and order must be maintained, but the objection to our present methods is that they so often do not deter the psychopath, while if they result in severe emotional reactions and repeated disturbed behaviour they are not of reformatory value. But, utilitarian reasons apart, punishment causing such a degree of purposeless mental suffering is surely as repugnant as the infliction of physical suffering, which nowadays is contrary to accepted doctrine. Moreover, paradoxically the psychopath, who from the very temperamental defects which drive him into crime tolerates the rigid discipline of prison life less well than the stable criminal, is morally less culpable. For the former often appears genuinely incapable of controlling his impulses, whereas the latter desists from crime

if it does not pay and takes his punishment philosophically if caught. It is to be hoped that the Criminal Reform Bill will grapple with this problem.

Summary and Conclusions

Eleven cases of the swallowing of foreign bodies by prisoners were investigated: 5 only pretended to do so, or swallowed harmless objects, and required two operations between them; 6 swallowed objects and needed 15 major operations in all. The former were stable, the latter emotional and depressed, and all 6 were markedly affected by solitary confinement. The swallowing of foreign bodies therefore appears either to be due to very mundane causes or to be caused by severe depression in unstable individuals.

I should like to make acknowledgments to Col. G. D. Gripper, the O.C. of my hospital, and to Lieut.-Cols. Jarret and Mackay, O.C.s of the military prisons concerned, who took great trouble to facilitate my investigation. I also wish to thank Capt. Oliver, psychologist to a W.O.S.B., for his help in our abortive attempt to test the prisoners.

SWALLOWED FOREIGN BODIES

SOME CASES TREATED IN A MILITARY HOSPITAL

BY

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Major, R.A.M.C.

The practice of swallowing foreign bodies as a means of gaining admission to hospital is not uncommon in military prisons. The treatment of these cases presents many problems, both surgical and psychiatric. There are two large detention barracks in the area served by this hospital and 19 individuals have been treated here for the condition. Some have been admitted on several occasions, making a total of 29 admissions.

It is proposed to deal with only the surgical aspect. The cases have been set out in the accompanying Table, from which it will be seen that the outcome has been as follows:

Foreign bodies passed per rectum ..	20
Operations	12
Gastrotomy	7
Caecostomy	1
Colostomy	1
Laparotomy only	3
Deaths	0

A surprising assortment of objects have passed through the intestinal tract with impunity. These include nails, pieces of glass, spoon handles, pieces of wire, brass buckles, broken razor-blades, and, on one occasion, a needle. They have appeared at intervals of from 48 hours to 12 days after being swallowed.

Table Showing Analysis of Cases

Case No.	Date	Object Swallowed	Treatment	Comment
1	4-13/4/45	Collar hook and buttons	No operation	Passed per rectum
	20/4/45-12/5/45	Numerous F.B.s	Gastrotomy on 22/4/45; 22 metallic F.B.s removed	Uneventful recovery
2	25/5/45-6/6/45	2 screws	No operation	Passed per rectum
	6/6/45	Numerous F.B.s	Gastrotomy 11/6/45	Uneventful recovery. Transferred to mental hospital
	17/4/45-2/5/45	Spoon handle	No operation	Passed per rectum
	21/4/45-15/5/45	"Nails, etc."	Gastrotomy 22/4/45. F.B. removed	Uneventful recovery
3	23/5/45-6/6/45	Spoon handle and other F.B.s	No operation	Passed per rectum
	12-29/6/45	"	Gastrotomy 18/6/45. Spoon handle removed. Other F.B.s had passed pylorus	Uneventful recovery. Other F.B.s passed per rectum
	14-30/11/45	Spoon handle	No operation	"
4	13/6/45-2/7/45	Nails and other small F.B.s	Laparotomy 18/6/45	On 24/11/45 F.B. still in stomach. Pre-operative radiograph after morphine and hyoscine showed F.B. to have passed pylorus. Ultimately passed per rectum. Transferred to mental hospital
	8-30/7/45	Thermometer and various bits of wire	Gastrotomy 19/7/45. F.B.s removed	Nothing palpable in stomach. Abdomen closed without further exploration. F.B.s passed per rectum
	10/1/46	Spoon handle	No operation	Uneventful recovery
	17-20/6/45	Various small F.B.s	"	Passed per rectum
5	18-24/6/45	Spoon handle	"	"
6	19/6/45-22/9/45	3 pieces of wire	Laparotomy. Removal of wire from pelvic colon. Colostomy 30/6/45	Progress of F.B. observed by radiographs every 3 days. Wire perforated pelvic colon on 11th day. Uneventful recovery
7	5-16/7/45	2 spoon handles	Gastrotomy 6/7/45. F.B.s removed	Uneventful recovery
8	20-21/7/45	Pieces of glass	No operation	Passed per rectum after discharge from hospital
9	7-18/8/45	Open safety-pin	Laparotomy 7/8/45. Pin removed from caecum	Uneventful recovery
10	17-18/9/45	Various small metallic F.B.s	No operation	Passed per rectum, after discharge from hospital
	20-25/8/45	Spoon handle	"	Pre-operative radiograph after morphine and hyoscine on 25/8/45 showed F.B. to have passed pylorus.
11	24-25/1/46	2 spoon handles	"	Passed per rectum
	7-20/11/45	Spoon handle	Laparotomy. F.B. had passed pylorus. Abdomen closed without further search	Passed per rectum, after discharge from hospital
12	24/11/45-13/12/45	Toothbrush handle, spoon handle, and wire	Gastrotomy 30/11/45. F.B.s removed	Passed per rectum
13	10-17/1/46	Three small metallic F.B.s	No operation	Passed per rectum, after discharge from hospital
14	16-18/1/46	Ring and other small F.B.s	"	"
15	16-18/1/46	Spoon handle	"	"
16	16-18/1/46	Screws and other small F.B.s	"	"
17	16-18/1/46	Sewing needle	Laparotomy 20/1/46. Needle passed pylorus. Abdomen closed without gastrotomy	Passed per rectum 26/1/46
18	19-26/1/46	"	"	"
19	21-23/1/46	Spoon handle and piece of wire	No operation	Passed per rectum, after discharge from hospital

Perforation occurred only in Case 7. On this occasion a piece of wire 3 in. (7.5 cm.) long became impacted in the pelvic colon for seven days. At operation the wire was found projecting into the peritoneal cavity through a hole in the pelvic colon and there was considerable pelvic peritonitis. The wire was removed, the bowel repaired, and a left iliac colostomy performed. This was later closed, but the man was in hospital for three months. The chances of perforation are evidently not great; nevertheless every effort must be made to avert it. It has been suggested that it is worth swallowing some cotton-wool in the hope that it will entangle a sharp foreign body in a woolly bolus. This was tried on one or two occasions, but with no noticeable effect. Liquid paraffin may safely be given, but it is not advisable, on theoretical grounds, to give any purgatives, as convulsive movements of the bowel might precipitate a perforation.

In some of the earlier cases in this series it was considered, from the size or quantity of objects in the stomach, that they were unlikely to negotiate the intestinal tract without damage, and in these laparotomy was performed. However, in several cases, although the foreign bodies had been shown in pre-operative radiographs, when the abdomen was opened nothing was palpable in the stomach. The abdomen was closed without further exploration, and in all cases the foreign bodies ultimately appeared per rectum. It seems likely that an injection of morphine and hyoscine relaxes the pylorus and helps the stomach to empty. This was given with success in Cases 3 and 11, and it is well worth trying where there is no indication for early operation.

Indications for Operation

1. It is advisable to remove objects which remain in the same position in the bowel for seven or eight days. The mucosa of the stomach which has retained foreign bodies for more than a week is found at operation to be very congested and oedematous. In these circumstances there is clearly a danger of perforation even with blunt objects. So long as there is slow progress operation is not called for. In several cases spoon handles have been passed naturally after 10 to 12 days.

2. Sharp-pointed needles or objects unlikely from their shape to negotiate the intestinal tract are better removed from the stomach, where their location is relatively easy and where the bowel can be most safely opened.

3. If perforation occurs.

The routine treatment adopted has been to keep these men under observation on a normal diet and to take radiographs every three days. Operation was undertaken only in the presence of one or other of the indications enumerated above.

I am indebted to Col. G. D. Gripper for permission to publish these cases.

At a meeting of representatives of special hospitals organized for postgraduate teaching held at the Hospital for Sick Children on Feb. 11, with Sir Ernest Gowers in the chair, it was unanimously decided to set up a representative body to be known as the Association of Postgraduate Teaching Hospitals of Great Britain. Membership of the association is limited to hospitals or groups of hospitals having directly attached to them institutes federated or about to be federated to the British Postgraduate Medical Federation (University of London) or, in the case of provincial hospitals, institutes recognized and financially supported by a university as postgraduate teaching centres. The objects of the new association were defined as "to keep under review all matters peculiarly affecting the interests of the member hospitals, and to act as a negotiating body directly with the Ministry of Health, universities, local authorities, and other bodies on behalf of those hospitals on such matters as may peculiarly affect them." The acting hon. secretary is Mr. John Young, of the Royal National Throat, Nose and Ear Hospital, Gray's Inn Road, London, W.C.1.

VARIATION IN THE TITRE OF Rh ANTIBODY DURING PREGNANCY

BY

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Many published cases indicate that severe erythroblastosis may occur where there is only a comparatively low titre of antibody in the maternal serum—for example, Cases 1, 3, and 6 of a series recently published by Cappell (1946). This author suggests that a rising titre of maternal antibody during pregnancy would indicate the presence of a Rh-positive foetus. He also says that the foetus may be affected without any such rise in titre taking place. In this connexion little attention appears to have been devoted to the possible effect which the continued presence of the foetus might exert on the titre of the maternal antibody by acting as an absorbing agent. For this reason the following case seems worthy of record.

Mrs. W., Group O, Rh-negative rr. Mr. W., Group O, Rh-positive R₂R₂. March 12, 1942: Male full-term child, alive and well. Group O, Rh-positive, R₂r. June 24, 1944: Male full-term child, icterus gravis, died in a few hours. Dec. 5, 1944: Uterine bleeding, probably abortion. March 1, 1945: Abortion. Aug. 1, 1945: Abortion.

Aug. 10, 1946: Female child, caesarean section at 32 weeks, Icterus gravis. Transfused with Rh-negative blood. Died after twelve hours. Group O. Red cells inagglutinable by anti-D serum, presumably due to blocking effect of incomplete anti-D from mother's serum. Weakly agglutinated by rabbit anti-human globulin serum (Coombs *et al.*, 1946). Blood films frankly erythroblastic. Baby's serum gave positive blocking test. Antibody was not demonstrated directly by the conglutination method, but when the baby's serum was added to the first tube that showed no agglutination in a titration of the mother's serum by the conglutination method agglutination of Rh₂ cells resulted.

The mother's serum contained a weak antibody, complete anti-D, after the second pregnancy. The titre of this antibody fell after a few weeks. Her serum was first titrated by the conglutination method (Wiener, 1945) before the commencement of the last pregnancy. The titration figures given below suggest that the antibody titre was falling before pregnancy began. A rise occurred early in pregnancy, followed by a fall. This, we suggest, is probably due to the absorption of the antibody by the Rh-positive foetus. Pregnancy was terminated when the titre started to rise—that is, about the 32nd week. Delivery was followed by an immediate marked rise in titre.

Date	Titre Complete Anti-D	Titre Incomplete Anti-D
31/10/45	Nil	1: 96
4/3/46	"	1: 32
5/4/46	"	1: 128
15/5/46	"	1: 8
31/5/46	"	1: 4
13/6/46	"	1: 8
29/7/46	"	1: 16
7/8/46	"	1: 16, tr. 1: 32
27/8/46	"	1: 256
30/9/46	"	1: 256

Our thanks are due to Dr. R. R. Race for genotyping Mr. W. and for confirming the presence of incomplete anti-D in Mrs. W.'s serum.

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