after a 200-mg dose of alprenolol blockade was incomplete. Saameli² showed in anaesthetized dogs that the duration of action of a single intravenous dose of pindolol is appreciably longer than that of an equivalent dose of propranolol. These findings suggest that the therapeutic action of pindolol might last longer than that of propranolol or alprenolol, but they do not explain why in our patients it apparently lasted for a week. Possibly with prolonged dosage (over a period of four weeks in our study) pindolol becomes fixed in the tissues and is then released slowly. Perhaps all beta-blocking drugs become fixed for a time in the tissues and the duration of their action depends on how quickly they are released. This is a matter which might be investigated.—We are, etc.,

P. D. NIGAM
A. S. MALHOTRA

Lady Hardinge Medical College,
New Delhi,
India

- 1 Olsson, S. B., and Varnauskas, E., *Indian Heart Journal*, 1972, 24 (Suppl. 1), 167.
2 Saameli, K., *Indian Heart Journal*, 1972, 24 (Suppl. 1), 146.

** Although clinical trials are in progress, pindolol (LB46, Sandoz; 4-(2-hydroxy-3-isopropylaminopropoxy) indole) is not yet commercially available in Britain.—Ed., *B.M.J.*

Spina Bifida Splint

SIR,—The "Draycott-Oswestry" spina bifida splint described here has been used successfully in this hospital for the past six months for maintaining the required position of the legs after operation on children with myelomeningocele. It can be made cheaply from standard National Health Service sheepskin and it obviates the pressure problems of plaster-of-Paris splinting.

Fig. 1 shows the front and fig. 2 the back view of the sheepskin with Velcro bands attached. The views (figs. 3 and 4) of the splint in position show that the bands are not in contact with the patient's skin and that those holding the legs pass through the sheepskin. A later addition that has proved useful after talectomy has been the addition of foot supports (fig. 4). The sheepskin is tailored to fit from the nipple line to feet, allowing for extensions for covering the soles of the feet to the end of the big toe. The width at the nipple line and around the pelvis at great trochanter level should allow for 1 in (2.5 cm) overlap.

We keep the splint continuously in posi-

tion, except for napkin changing and washing, until the wound has healed and then we apply it only at night. Incontinence has not been a problem when waterproof pants are worn. The wool side of sheepskin is easily rubbed dry (canvas-backed nursing fleeces tear and soil easily and are unsuitable). Pathological fracture of the femur can be effectively treated with the splint. It prevents external rotation, and shortening can be overcome by incorporating a Ventifoam extension (fig. 4).

We thank Mr. G. K. Rose for access to his patients and the photographic department of the Robert Jones and Agnes Hunt Orthopaedic Hospital for the illustrations.

—We are, etc.,

B. J. BROTHERTON
V. DRAYCOTT

Robert Jones and Agnes Hunt Orthopaedic Hospital,
Oswestry, Shropshire

Immunoglobulin Deficiency Syndrome

SIR,—Over the past six years I have had the interesting experience of seeing nine patients with the following symptoms in common: (1) generalized cramping, colicky abdominal pain; (2) pyrexia; (3) emotional irritability; (4) occasional diarrhoea; and (5) hypogammaglobulinemia as measured by immunoelectrophoresis. Six of the nine patients with this syndrome were aged 8-16 years and the other three were 35 or over. All the patients had a low IgA or IgM (see table). The blood count, intravenous pyelogram, and urine and stool cultures, and investigation of the gastrointestinal tract were normal. No giardia were found. The symptoms had persisted despite various treatments.

Patient	Age (Years)	IgA (mg/100 ml)	IgM (mg/100 ml)	IgG (mg/100 ml)
1	8	36	60	950
2	10	120	30	1,040
3	16	75	35	950
4	8	41	28	720
5	11	80	40	1,300
6	8	150	65	920
7	35	80	110	1,300
8	56	100	90	650
9	35	280	37	750

All nine patients were completely cured of their syndrome after two 5-ml intramuscular injections of gammaglobulin (IgM and IgA), and they were maintained on a dose of 2.5 or 5.0 ml every four to six weeks. A full report of these patients will be presented shortly. They seem to fall into a general category of patients described by several authors.¹⁻³

The "irritable bowel" or peculiar abdominal pains could perhaps be explained by the deficiency of immune globulins. I would be interested to hear if others have met this problem. Further studies are needed.—I am, etc.,

JOHN A. ARCADY

Presbyterian Hospital and Department of Biology,
Whittier College,
Whittier, Calif.,
U.S.A.

- 1 Rosen, F. S., and Janeway, C. A., *New England Journal of Medicine*, 1966, 275, 709.
2 Hermans, P. E., et al., *American Journal of Medicine*, 1966, 40, 78.
3 Kirkpatrick, C. H., Waxman, D., Smith, O. D., and Schinke, R. N., *Archives of Internal Medicine*, 1968, 121, 273.