cancer patients in view of its effect as a stimulator of prolactin release.

Unfortunately, a suitable alternative agent may be difficult to find as the phenothiazine derivatives, which include prochlorperazine, are also known to stimulate lactation and to raise serum prolactin levels. It is possible that for susceptible patients we may have to return to the use of older remedies such as pyridoxine.—I am, etc.,

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¹ Ettigi, P., Lal, S., and Friesen, H. G., *Lancet*, 1973, 2, 267.

SIR,—Dr. H. W. C. Ward (20 July, p. 169) criticizes the use of metaclopramide in the treatment of radiation sickness in patients with breast cancer. This criticism is based on the finding that the drug stimulates prolactin secretion and the hypothesis that in so doing it may increase the growth rate of metastases. In its place he advocates continued use of one of the common drugs used for the condition—a phenothiazine, prochlorperazine. Drugs of this group cause a rise in plasma prolactin in normal subjects and patients with breast cancer.

There is no evidence to support the belief that patients with breast cancer, either primary or advanced, have elevated prolactin levels unless they receive one of the many drugs which stimulate prolactin release. This includes stilboestrol, which is widely and successfully used in the treatment of this disease.^{1,2} Female patients who have received long-term treatment with phenothiazines have chronically elevated prolactin levels but there is no evidence of an increased incidence of breast cancer.³ In the Westminster Hospital group's work on prolactin dependence in breast tumours in tissue culture quoted by Dr. Ward⁴ a "near physiological concentration" of ovine prolactin is added to the medium.⁵

The suggestion that prochlorperazine should replace metaclopramide because of the latter's effect on prolactin release further supports the view that there is no relationship between elevated circulating prolactin levels and human breast cancer.—I am, etc.,

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¹ Boyns, A. R., et al., *European Journal of Cancer*, 1973, 9, 99.

² Wilson, R. G., et al., *Cancer*, 1974, 33, 1325.

³ Wilson, R. G., et al., *Proceedings of International Symposium on Human Prolactin, Brussels*, p. 266. Amsterdam, Excerpta Medica, 1973.

⁴ Salik, H., et al., *Lancet*, 1972, 2, 1103.

⁵ Hobbs, J. R., et al., *Proceedings of International Symposium on Human Prolactin, Brussels*, p. 249. Amsterdam, Excerpta Medica, 1973.

The Unproductive Minority

SIR,—Professor A. D. B. Clarke, speaking on mental subnormality at the B.M.A. Scientific Meeting (27 July, p. 240), gave a balanced assessment of the potential of subnormal and severely subnormal patients, adding that there are about 5% who will certainly not achieve anything as regards productivity. He is reported as saying: "It could be questioned whether one should strive too heroically to prolong their existence."

It is, however, unchristian to condemn efforts to prolong their lives simply because

they themselves are unproductive. Certainly one would not wish to prolong painful or intolerably uncomfortable lives by unnatural means. But one must never condone the assessing of the worth of human beings according to their productivity. If we did, the euthanasia lobby would have a field-day collecting supportive statistics from our geriatric services. I doubt whether Professor Clarke really meant to imply such an attitude, but one must be on one's guard.—I am, etc.,

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Gastric Balloon Displacement in a Sengstaken Tube

SIR,—Dr. C. J. Hawkey and Mr. N. R. Peden (6 April, p. 58) reported a case in which the gastric balloon of a Franklin Sengstaken-Blakemore tube was forced away from its filling lumen to a position where it could no longer be filled or deflated. I wish to draw attention to a similar failure in a Warne Sengstaken (Blakemore type) oesophageal varices tube which made it impossible to apply tamponade to the lower third of the oesophagus.

A 57-year-old woman was admitted with haematemesis and melaena from oesophageal varices. In order to control the bleeding a Warne Sengstaken (Blakemore type) oesophageal varices tube was passed and the gastric balloon was inflated with 50 ml of 25% Hypaque and impacted at the hiatus. The oesophageal balloon was then inflated with saline. Two pounds (0.9 kg) of traction was applied to the tube via a pulley. A chest x-ray confirmed that the gastric balloon was impacted at the hiatus. Twenty-four hours later it was noticed that the upper end of the oesophageal balloon was in the mouth. A repeat chest x-ray showed that the position of the gastric balloon was unchanged. The patient went into hepatic coma and died 36 hours after the insertion of the tube. After death the Sengstaken tube was removed and it was found that the gastric balloon had slipped down the tube and was inverted upon itself (see fig.). This had allowed

the oesophageal balloon to pass up the oesophagus so that no tamponade would have been applied over the lower third of the gullet.

This Sengstaken tube and another of identical type made by the same manufacturer were x-rayed and a small radio-opaque marker was detected at the lower end of the oesophageal balloon. The patient's chest x-rays were then re-examined and the marker was visible three vertebral bodies above the gastric balloon in both plates. This had been noted in life but its significance was not appreciated. Inspection suggested that it may be relatively easy for the gastric balloon to become inverted upon itself and allow the oesophageal balloon to pass into the middle and upper oesophagus. It would thus seem desirable, as Dr. Hawkey and Mr. Peden suggested, for Sengstaken tubes to be redesigned on the lines of a Foley urinary catheter with continuous rubber balloons.

This occurrence is reported so that others may be aware of it and also to point out that it should be possible to detect tube failure on routine chest radiographs as the small radio-opaque marker should always be seen to be in close proximity to the gastric balloon when this is filled with radio-opaque material. Separation of the marker from the gastric balloon should arouse suspicion of detachment of the gastric balloon and with it loss of effective oesophageal tamponade. At present the promotional literature which accompanies Warne Sengstaken (Blakemore type) oesophageal varices tubes does not record the presence of the radio-opaque marker or its relationship to the two balloons. Warne Surgical Products Ltd. know of no similar occurrence with their Sengstaken (Blakemore type) oesophageal varices tube.—I am, etc.,

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Stresses of Management Selection Courses

SIR,—It has recently become fashionable to hold intensive management and executive hotel selection courses on a residential basis. These are usually held in hotels or similar settings and participants are encouraged to communicate freely without their usual defences or conventions. Intense rivalry may be deliberately encouraged in "initiative" or "leadership" exercises. Alcohol flows fairly freely and participants know that they are under continuous observation and are often forced into interactions of a "game" type, which are familiar to the trained professional but cause the inexperienced intense anxiety. They dare not reveal this as they fear it would be seen as a sign of weakness or unsuitability. Latent feelings—for example, of sibling rivalry, of anti-authority resentment, or even unconscious homosexual fears—may become mobilized and, particularly in marginally adjusted individuals who may be only barely coping with their job and are suddenly transplanted to such a situation, psychiatric breakdown may occur.

Such courses may be seen as a valuable formative experience by the successful and well-adjusted and may well be useful to the sponsoring organization. The individuals conducting them are trained in the skilful use of stress to identify successful participants, but usually not in the equally important task of identifying and salvaging the inevitable failures. The latter, therefore, may not only be caused intense anguish, loss of confidence, and impaired efficiency in subsequent work but, in extreme cases, may present to the general practitioner, the

Tube removed from patient (right) compared with an unused tube (left). The arrows show the position of the radio-opaque marker.