themselves to logical interpretation. Rather they perpetuate the need for empirical rules in interpretation.

The electrocardiogram is recorded in two planes, the frontal and transverse. The frontal plane includes the six limb leads. There is disagreement about precise reference of these leads to the heart. Earlier hexaxial reference systems were based on an absolute acceptance of Einthoven's theories. It is now thought that these theories may not be accurate, and a corrected reference system has been introduced.¹ Whatever the theoretical considerations, in practice these six limb leads may be represented as viewing the heart from a series of approximate positions in the frontal plane. Uhley and Rosenblum⁴ consider that it would be logical to display the limb leads in the order aVR, aVL, I, II, aVF, III.

The chest leads describe an arc in the transverse plane. The two planes coincide in the area of V₆, so that V₆ could also be included with the frontal plane leads. V₆ is usually intermediate in pattern between leads I and II, as would be expected from their points of reference. Thus the two planes may be combined in displaying the electrocardiogram (see Fig.). When mounted in this way there is a gradual change of pattern from aVR, through aVL, I, V₆, II, aVF, to III, and similarly from VI-6. The electrical axis can be read at a glance. Ischaemic changes will be grouped together, so that, for example, a lateral infarction would give rise to abnormal tracings in leads mounted along the right-hand side of the paper.

Aminocaproic Acid and "Proteinuria"

SIR,—Your Today's Drugs article on aminocaproic acid (Epsikapron) (23 December, p. 725) indicates that this drug is being increasingly used in treating haemorrhagic states. Our own experience has been chiefly in the control of haemorrhage following dental extractions in patients with haemophilia.¹

This presentation may simplify interpretation.—I am, etc.,

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Swallowed Dental Reamer

SIR,—The letter by Mr. R. A. D. Booth and others (11 November, p. 356) about an ex-dental nurse who swallowed a dental reamer prompts me to record an interesting case we had recently in Kabale Government Hospital.

The patient was an African male in his early thirties and he complained of pain in his right loin. On examination he had a very large swelling which I thought was a right perinephric abscess. On incision, in addition to the expected pint of pus, we also found a 5-inch (12.5 cm.) nail identical to the ones sold in the local shops, except that it had no head.

When we presented the nail to the patient he rather sheepishly admitted that three months previously, when in gaol at Kilembe, he had swallowed it in a suicide attempt and had since had a lot of abdominal pains. I am happy to record that the patient made a good recovery.—I am, etc.,

Kabale Hospital,
Uganda.

G. D. VINDEN.

Poisoning by Oil of Wintergreen

SIR,—Recent experience has led me to believe that the composition of oil of wintergreen is not fully appreciated by profession and public alike. It must only rarely be prescribed nowadays, but it is still freely available at any chemist at a cost of 2s. 6d. for a 4-oz. (120 ml.) bottle. The substance wintergreen is an extract from wintergreen leaves, and as such is a liquid. It consists of pure methyl salicylate, and was at one time used orally in the treatment of rheumatic fever. Pure methyl salicylate is still sold as wintergreen, but since it is now used only as a liniment the label instructs one to dilute it 1 in 4 with vegetable oil. Oil of wintergreen is the 25% by volume dilution already prepared, and its *British National Formulary* description is methyl salicylate liniment, B.P.C. Its efficacy as a liniment is due to the local analgesic effect of the methyl salicylate, which is also responsible for its characteristic odour.

Children in the toddler age group will swallow almost anything they should not, and the pungent smell of wintergreen is likely to attract them. There are now many cases on record—mostly from the United States of America—of fatal poisoning in children from the accidental ingestion of wintergreen. Even a quarter of the 4-oz. bottle of oil of wintergreen will contain the equivalent of 90 gr. (6 g.) of aspirin, a lethal dose for any small child. A teaspoonful of pure wintergreen is approximately the same as 60 gr. (4 g.) of aspirin. Yet the label on the bottle, at most, says "Not to be taken." The accidental ingestion of all forms of salicylate by small children is still far too common. When advising parents about this we should include reference to wintergreen as one of those substances which should be kept well out of children's reach—preferably by not having them in the house at all.—I am, etc.,

R. R. GORDON.

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Sheffield.

Reaction of Albustix to Urine Containing Varying Levels of Aminocaproic Acid

Subject	pH	50 mg./ml.	25 mg./ml.	20 mg./ml.	15 mg./ml.	10 mg./ml.	0 mg./ml.
1	6.5	++-	+	Trace	Trace	Trace	-
2	7.0	+++	+	-	-	-	-
3	6.0	+++	+	+	-	-	-
4	6.0	+++	+	Trace	Trace	Trace	Trace*
5	6.0	+++	+	„	-	-	-

* Negative to sulphosalicylic acid.

McNicol and others¹ have demonstrated that aminocaproic acid is excreted almost entirely through the kidneys, and that urine concentrations of up to 25 mg./ml. are found during normal therapeutic dosage with unrestricted fluid intake. Neither they nor subsequent authors describing its clinical use have drawn attention to the confusion which may arise if Albustix is used for routine urine testing when therapy is in progress.

Our attention was drawn to this when a haemophilic boy, in hospital for dental extractions, was unexpectedly reported as having heavy proteinuria. The urine had been tested, using Albustix. It was possible to resolve quickly the problem by showing that no precipitate formed on boiling the urine, nor when sulphosalicylic acid was added. A number of similar false-positive reactions from Albustix have subsequently

been found when aminocaproic acid therapy is in progress. As many patients receiving aminocaproic acid are likely to have routine urinalysis, it is clearly important to recognize this artifact. Further investigations by the manufacturers, Kabi Pharmaceuticals, have shown

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Surgery for Intracranial Tumours

SIR,—We read with interest your leading article on "Surgical Treatment of Intracranial Tumours" (2 March, p. 531), but we were disappointed to see very little mention about the role of surgery in the management of metastatic intracerebral tumours. This prompts us to report one of our cases who just left hospital a fortnight ago and is doing quite well.

A 50-year-old man, a farmer by profession, with a young family, was first admitted in December 1966 with jaundice and melaena, and subsequently found to have carcinoma of the ampulla of Vater. This was removed surgically in March 1967. Following his operation he made a satisfactory recovery and was gaining weight until his recent admission to this hospital on 5 February 1968, when he presented with headache, vomiting, and weakness in the right arm. On examination the striking finding was a left homonymous hemianopia and sensory inattention on the left half of his body. He had difficulty in recognizing objects put in his left hand, but there was no obvious motor abnormality. Lumbar puncture was done and showed an increased protein in the cerebrospinal fluid. He was transferred to the neurosurgical unit, Aberdeen, where he was operated upon on 14 February. A circumscribed tumour in the occi-