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CIMETIDINE VERSUS CIMETIDINE PLUS PIRENZEPINE IN PREVENTING UPPER GASTROINTESTINAL TRACT BLEEDING IN PATIENTS OF AN INTENSIVE CARE UNIT - A RANDOMISED, PROSPECTIVE, CONTROLLED CLINICAL TRIAL -

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Introduction: The combination of cimetidine and pirenzepine results in a stronger and longer lasting suppression of gastric acid secretion than cimetidine alone. Therefore cimetidine plus pirenzepine should be more effective in the prevention of upper GI-tract bleeding than cimetidine alone. Methods: Patients admitted to the medical intensive care unit of the University of Düsseldorf from May 1982 to November 1982 were included in the study. Upon admission all patients were randomized into one of the two treatment groups A or B by a table of random numbers. Patients with upper GI-tract bleeding, recent GI-tract operations etc. were excluded from the protocol. Those in group A received 200 mgs cimetidine iv every 3 hours during the entire stay in the intensive care unit. Those in group B additionally received 40 mgs of pirenzepine/day by continuous infusion. Results: 95 patients of group A and 105 patients of group B met the criteria. The distribution of patients with regard to sex, age, and severity of illness were comparable for both treatment groups. There was only 1 patient with acute upper GI-tract bleeding and 1 with chronic bleeding in group B. No bleeding was observed in group A. Conclusions: In patients of a medical intensive care unit the prophylaxis of upper GI-tract bleeding by cimetidine alone proved to be effective. Therefore no additional positive effect of a combined treatment with cimetidine plus pirenzepine could be shown.

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COMPUTER-ASSISTED METHOD FOR EVALUATION AND DOCUMENTATION OF DATA FROM GLUCOSE CONTROLLED INSULIN INFUSION SYSTEMS IN CRITICALLY ILL PATIENTS. G.Müller-Esch, A. Peters, M. Göhl, M. Mewes, P. C. Scriba, Klinik für Innere Medizin, Medizinische Hochschule Lübeck, Lübeck, Germany.

Glucose controlled insulin infusion systems (GCIIS) seem to be a valuable tool in the metabolic treatment of critically ill patients. The incidence of 4320 measurements from the GCIIS during a 24-hour control period is the main reason for developing this method, which permits a comfortable handling of a vast number of data. The procedure is based on a BASIC computer programme, that will be demonstrated.

Inputmode: An interface between the GCIIS and the microcomputer PC 800 (MAGIRUS DATENTECHNIK) has been employed to transfer all data directly at one minute intervals. Further, comments concerning actual therapy can be inserted manually.

Calculations: The following parameters, characterizing the state of carbohydrate metabolism, may be calculated:

- MBG = mean blood glucose
- M-value = a measure for the duration and the degree of pathological blood glucose levels (1)
- MAGE = mean amplitude of glycemic excursions (2)
- an index, indicating the sensitivity to insulin.

Record: Blood glucose, insulin rate and dextrose rate are plotted continuously. Comments will be printed, too.

Documentation: All recorded data are stored on a 5 inch floppy disk.

Conclusion: The method permits complete processing of GCIIS-data, which is almost impossible when confined to manual computation. Its usefulness in the treatment of critically ill patients, especially during metabolic therapy with glucose-insulin-potassium in acute myocardial infarction, will be demonstrated (Supported by the Federico Foundation).

1. Schlichtkrull, J. et al.: Acta med. Scand. 177 (1965), 95
2. Service, F. J. et al.: Diabetes 19 (1970), 644