

221. THE COMPUTER ANALYSIS WITH DISCRIMINANT FUNCTION ON GASTRIC ULCER

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The statistical studies were performed to determine for the purpose of adaptability of surgical treatment on the gastric ulcer.

The classificatory computation was performed to discriminant function with Scientific Subroutine Package produced from I. B. M..

The computation results suggested that the gastric ulcer, as larger as in size was frequently possible to belong in ulcerating stage. Also, ulcer occupied in location as higher as upper part from pyloric ring was shown the same results. Next, all clinical symptoms as diagnostic information were imputed into computer for the purpose of classificatory computation on gastric ulcer in size. The results suggested that it is easy to distinguish or discriminate the kissing and oval ulcer from the other types of ulcer but the linear one was difficult so on.

With clinical symptom input, the same classificatory computation results between ulcerating stage and scarring one, indicated that the non-specific abdominal pain without meal, (not sharp), may have the great parameter than any other symptoms.

Conclusion :

Above mentioned results indicated that, that is, the patients with gastric ulcer, as having non-specific abdominal pain without meal, larger in size, upper part from pyloric ring in location, and senile ulcer might be judged to get the application or adaptability of surgical treatment for gastric ulcer.

222. THE COMPUTER EVALUATION AND DIAGNOSIS OF POLYPOID LESION OF THE STOMACH, USING RADIOLOGIC FINDINGS

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SUMMARY

Intending to improve the radiologic diagnosis of the stomach, we summarized various kinds of polypoid growths of the stomach as "Polypoid Lesion" and, dividing them into four groups by their profile view, we investigated size, roughness of the surface and indentation of the base. (Yamada T. *et al.* '65)

Using the computer technique and facilitating the multiple calculations, we purposed the standardization and the objectivity of the radiologic diagnosis in this study.

Applying the Bayes theorem, we calculated the probability of malignancy, basing on the macroscopical type, size, roughness of the surface and indentation of the base of 264 operated polypoid lesions.

Investigating the diagnostic validity on 77 polypoid lesions of the stomach, we were revealed the diagnostic accuracy of 91% and 87% by the computer and radiologic diagnosis respectively. This is due to the characteristic data processing of the computer. On the other hand, the computer could diagnose correctly 82% of the minimal lesions, like the early gastric carcinomas. This is due to the poor data acquisition and/or deficient plan processing for the rarely experienced lesions.

The computer diagnosis could become a great help to the standardization, objectivity and the pre-operative final diagnosis, investigating the plan processing and the data processing.