CAN WE IDENTIFY WHICH STROKE PATIENTS SHOULD HAVE A CAROTID DUPLEX DOPPLER SCAN?

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Introduction

After the first stroke or TIA, the risk of recurrent stroke is highest in the first year. Secondary prevention includes, control of risk factors, medical (aspirin or anticoagulation) and surgical intervention (Endartrectomy). Duplex Doppler Ultrasoundography (DDS) is used to identify patients for Endarterectomy (>70% Carotid stenosis). This study examines whether there are any differences between those with critical stenosis and those without.

Methodology

Retrospective Descriptive study. 303 case notes were reviewed. Patients with TIA or CT confirmed ischemic strokes were included. (Normal CT scan but with clinical focal neurological deficit was assumed to be a stroke). Functional recovery Barthel Index (BI), Mental state (AMT) and Coexisting Morbidity (COMOB) were recorded. Nonparametric statistical analysis was used.

Results

<table>
<thead>
<tr>
<th>DDS</th>
<th>BI Mean 19.7 (18-20)</th>
<th>AMT Mean 9.8 (4-10)</th>
<th>COMOB 47.8% (52.8%)</th>
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<tbody>
<tr>
<td>DDS</td>
<td>No DDS</td>
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Comparing DDS >70% vs DDS <70%

- BI p<0.01 (a)
- AMT p<0.01 (a)
- COMOB p<0.02 (b)

(a) = Mann Whitney, (b) = Chi-Square

Conclusion

Using the parameters, BI, MTS and COMOB, we found no significant differences in patients with >70% stenosis and those with <70% stenosis. Therefore, we recommend, all stroke patients with good recovery (BI>15) should have DDS.

SCREENING OF FIBRINOGEN AND FIBRINOGEN DEGRADATION PRODUCTS IN THE ELDERLY

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Introduction

Cerebrovascular stroke and ischemic heart disease incidence increases with age. In this study, an attempt was made to determine how the biological factor of age affected the fibrinogen and fibrinogen degradation product levels and in so doing determining the effect of age on two important systems in the body involved in blood homeostasis, namely the coagulation and fibrinolytic systems.

Methodology

The population studied consisted of 120 subjects above the age of 60 and 120 young subjects aged between 20 and 40 years. Both groups were subjected to a clinical examination to exclude any underlying disease. A battery of haematological test was then performed namely: complete blood count, prothrombin time, activated partial thromboplastin time and more specific tests namely: fibrinogen degradation product levels and in so determining how the biological factor of age affected the fibrinogen and fibrinogen degradation product levels.

Results

The plasma fibrinogen concentration was found to increase with age. No significant difference in fibrinolytic activity was found between the young group and those aged between 60 and 70 years. However, a slight rise in fibrinolytic activity in the form of increased fibrinogen degradation product levels was detected in those aged above 70 years. The prothrombin levels were also found to increase with age. The partial thromboplastin time was found to shorten with age. No major changes occurred in platelets with age.

Conclusion

There is a definite rise in the plasma fibrinogen concentration with age which in turn is associated with increased risk for stroke since fibrinogen is a major determinant of blood viscosity. In future one should consider routinely screening for fibrinogen concentration levels in those aged above 60 years and, if found to be high, consider giving fibrinolytic agents prophylactically.