patent often had intraluminal abnormalities that progressed. By contrast, the left internal thoracic artery graft to the left anterior descending coronary artery has been associated with excellent patency and good clinical results[6]. In addition, clinical results and patency associated with use of the right internal thoracic artery as part of a bilateral right internal thoracic artery procedure have been encouraging. The revival of use of the radial artery as a graft has offered another easily accessible source of arterial conduits. Because of these considerations and in an effort to provide a patency rate of better than 50% at 10 years, the majority of grafts were used[7].

In group comparison it revealed that there was significant difference both in electrocardiography and enzyme studies between Group I vs Group II which is similar to the findings of Cohen et al[8].

The changes of CKMB and SGOT were associated with the changes on electrocardiography which is similar to the findings of Fennel et al[9].

There were no significant ECG changes at discharge and follow-up for 12 weeks after surgery.

In conclusion, our study suggests that the routine use of radial artery is not associated with peri-operative myocardial infarction in comparison to saphenous vein graft and does not make the CABG more complex.

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Md. Sharif Hasan[1], Asit Baran Adhikary[2] and Mostafizur Rahman[1]

[1]Department of Cardiac Surgery, Bangabhandhu Sheikh Mujib Medical University, Shahbag, Dhaka 1000; [2]Department of Cardiovascular Surgery, National Institute of Cardiovascular Diseases, Dhaka, Bangladesh. e-mail: drsharifhasan@yahoo.com

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Clinical features and cytogenetic pattern of Down syndrome

Chromosome disorders form a major category of genetic diseases. The most common autosomal disorder is trisomy 21, also known as Down syndrome, which is compatible with survival[1]. Down syndrome is associated with a characteristic set of facial and physical features. It occurs in all ethnic groups and geographical regions[2]. In Bangladesh, no general or regional data are available for Down syndrome. We conducted a study to see the distribution of cytogenetic pattern of Down syndrome by chromosomal analysis from peripheral blood and also to observe the clinical features.

Clinically and cytogenetically diagnosed 43 patients of Down syndrome were included during the period of October 2003 to June 2005. A complete clinical assessment and information pertaining to age, sex, birth order, maternal age at birth, parity and consanguinity were recorded. The patients were examined to detect the characteristic clinical features of Down syndrome. Then karyotyping with standard G-banding technique

was used[3]. Peripheral blood lymphocytes were collected and cultured for three days. Then they were treated with colchicine and harvesting was done with hypotonic solution and fixatives. Slides were prepared and stained with Giemsa stain for G-banding after trypsin treatment. For each patient 15-20 well-spread metaphases were counted which were extended up to 25 spreads to exclude mosaicism. To detect translocation 5-7 good quality spreads were analyzed.

Among them all (97.7%) but one were pure trisomy 21: 47 XX,+21 or 47XY,+21, while the remaining child (2.3%) had 46/47,+21 mosaicism. There were 29 males and 14 females with a sex ratio of 2.07:1.

The craniofacial features and the characteristic limb anomalies were seen in >50% of the cases which is shown in Table I. But squint and Brushfield spot were present in 4.6% and 2.3% of the cases respectively. Echocardiography was done in 21 cases of which 14 cases had cardiac anomalies. Thyroid hormone levels were available in only 10 cases and among them 3 cases had hypothyroidism. Moderate mental retardation was seen in 50% of the cases. Mild and severe mental retardation were seen in 42.1 and 7.9% cases respectively. The maternal ages at birth of affected children were recorded in 41 cases of which 78% of the mothers were below 30 years of age and 22% above it. Birth order of Down syndrome revealed a high frequency of first born (42.9%) followed by second born (26.2%). Among the first born Down syndrome children 94.4% were born to the younger mothers (<30 years).

Table I: Frequency of craniofacial features and limb anomalies (n=43)

Features	Number of positive cases (%)
Prominent epicanthic fold	41 (95.3)
Upward slant of palpebral fissures	41 (95.3)
Protruding tongue	29 (67.4)
Small ears	38 (88.4)
Simian crease	30 (69.8)
Clinodactyly	30 (69.8)
Sandal gap	38 (88.4)
Longitudinal line in sole	22 (51.2)

No case of translocation was detected. This is probably due to the limited number of cases.

Craniofacial features noted in the study cases included epicanthic fold (95.3%), upward slant of palpebral fissures (95.3%), protruding tongue (67.4%) and small ears (88.4%). Simian crease, clinodactyly, sandal gap and longitudinal line in sole were also present in >50% of the cases. Kava et al[4] observed similar findings in case of craniofacial features but cases of limb anomalies were less. This suggests that the frequency of clinical signs of Down syndrome may differ.

In the mosaic child, most of the clinical features were present such as epicanthic fold, upward slant of palpebral fissures, small ears, simian crease, clinodactyly, sandal gap and even cardiac defect. But mental retardation was mild and the child had 36% trisomic cells.

The reports of echocardiography were available in 21 cases, among which 14 (66.7%) had cardiac defect and the commonest one has ventricular septal defect. This finding is somewhat higher than those observed by Ahmed et al (34.9%) and Jaruratanasirikul et al (28.5%)[5, 6]. The higher frequency of associated cardiac defects in this study suggests that environmental factors may play a role in congenital anomalies.

A consistent pattern of association between advanced maternal age (average >30 years) and Down syndrome was obserbed[2, 7]. But the risk of Down syndrome live birth for women with increased age is considerably lower than the risk that has often been previously assumed. In this series the mean maternal age was 27.0 ± 5.9 years (median=26 years) with a higher frequency (78%) in the mothers <30 years of age. Recently similar observations were found by Kava et al. (27.8 years) and by Ahmed et al. (29.8 years)[4, 5]. The drop in the mean maternal age of Down syndrome mothers is probably due to early marriage and also reduction in fertility in the mothers >30 years of age. But a recent study[8] showed a higher mean maternal age of 32.1 years of children with Down syndrome in California whereas a lower mean maternal age of 26.9 years in the Czech Republic which suggests the influence of cultural, social and demographic factors. So it may be concluded that the mean maternal age of Down syndrome children may vary due to social, cultural and reproductive capability.

Birth order is unimportant. But some investigators have reported that first born infants may be at higher risk of Down syndrome than those born later, independent of maternal age, mentioned by Niazi et al[2]. In the present series the frequency of Down syndrome is high for the first-born and 94.4% of them were born to younger mothers (<30 years).

Although the study group in this report is small, it may be concluded that the result gives us an idea about the distribution of cytogenetic pattern and

frequency of clinical features of Down syndrome in our country. It also shows the necessity of further studies with large series to predict the incidence of Down syndrome including the translocation variants in our country for proper genetic counseling.

Saequa Habib, A.J.E. Nahar Rahman, Tammana Choudhury and A.K.M. Nurul Kabir

Department of Pathology, Bangabandhu Sheikh Mujib Medical University, Shahbag, Dhaka 1000, Bangladesh.

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Anatomical location and bony reaction in intracranial meningiomas

Intracranial tumors are usually intra-axial, extra-axial or intra ventricular[1]. Of all the intracranial tumors 50% to 60% are supratentorial and the rest are infratentorial[2]. Intracranial tumors represent 1.7% of all tumors and contribute to 1.8% of all deaths due to malignancy. The incidence of tumor of CNS ranges from 10 to 17 per 100,000 persons for intracranial tumors[3]. Meningioma is the second most common primary intracranial tumor in adults[4]. Meningiomas comprise approximately 20% of adult intracranial tumors.

The distribution of intracranial meningiomas is approximately as follows: convexiety (35%), parasaggital (20%), sphenoid ridge (20%), intraventricular (5%), tubercullam sellae (3%), infratentorial (13%), others (4%). Uncommonly sited tumors include intraosseous meningiomas and extraneuroaxial meningiomas. All reported intraosseous meningiomas have been in cranial bones. Extraneuraxial meningiomas can involve orbit, paranasal sinuses and nasopharynx[5].

The plain radiograph was used in the past for the detection of intracranial neoplasm and searched for evidence for intracranial calcification and signs of raised intra cranial pressure signs. The signs include sutural diastasis, sellar erosion, and pineal displacement and increased convolutional markings. Confirmation of the presence or absence of brain tumor involved the use of diagnostic procedures such as cerebral angiography or pneumoencephalography that required hospitalization and carried a degree of morbidity and risk.

Abnormalities of bone are frequently encountered in meningiomas. But it is very difficult to appreciate the exact frequency of bony reaction and / or invasion, because very few series mention this particular aspect. Hyperostosis or endosotsis are certainly more common than destruction of bone, and were found in 25% of Cushing cases[4].

An extensive hyperostosis can occur with a small meningeal tumor, a fact already pointed by Cushing, who separated hyperostoing 'en plaque' meningiomas from bone alterations accompanying 'global' or 'en mass' meningiomas.

Our study of 57 cases was carried out from July 2002 to March 2005. All admitted patients with intracranial meningioma who underwent surgery were considered. A checklist was prepared by the researchers considering the variables such as age of the patients, sex of the patients, clinical features, site of tumor, image findings, per-operative findings and histopathology report. The diagnosis of intracranial meningioma by histopathology was confirmed.

Table I represents the relationship between anatomical location and bony reaction. In case of convexity meningioma, we found 22 (38.6%) such type of case. Among them 36% were of hyperostosis type, 13.6% were erosion type, 4.5% were enmass type and 45.5% were presented without any bony reaction. 17.6% of parasagittal meningiomas