

In this study, 7 (10% of the total cases) cases positive for malignancy in FNAC, were negative in bronchoscopy. The lesions were beyond the reach of bronchoscope. However brush biopsy was taken in 5 cases and all were found malignant. These cases were not included in statistical evaluation due to lack of histopathological confirmation. Clinically, they were malignant and treated accordingly. Similar findings were also seen in the series of Rahman et al (2000)<sup>2</sup>, Ahmad (1998)<sup>9</sup>, in which most of the peripheral lung lesions were found bronchoscopically negative, though they were definitely diagnosed as malignant by FNAC or/and by brush biopsy.

Complications were minimum both in FNAC and brush in the present study. These findings were closed to those of Wallace et al (2000)<sup>6</sup>, Quiyyum et al (2000)<sup>10</sup>.

In conclusion, both the cytological processes i.e. transthoracic FNAC and cytobrushing are the effective, safe and reliable methods in the diagnosis of bronchogenic carcinoma.

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#### Angiographic profile in patients with congenital anomalous origin of the coronary arteries

Coronary artery anomaly occurs in less than 1% of the general population. It is frequently found in association with other major congenital cardiac defects. This letter focuses on isolated coronary artery anomalies (i.e., in the absence of other major congenital cardiac defects). In adults, the clinical interest in coronary anomalies relates to their occasional association with sudden death, myocardial ischemia, congestive heart failure, or endocarditic. In addition, presence of coronary artery anomalies may, at times, create challenges during coronary angiography, percutaneous coronary interventions and coronary artery bypass surgery<sup>1-4</sup>. Accordingly this study was done to evaluate the anatomical patterns, frequency of occurrence and significance of coronary artery anomalies in patients studied angiographically for proper management of the patients.

This study included 4,000 patients who underwent coronary angiography from 2004 to 2007 in a single center. Clinical histories, physical examinations, noninvasive laboratory studies, catheterization data and follow-up surveys were obtained. Patients with coronary anomalies occurring as part of congenital complex heart disease were excluded in this study. Patients with isolated coronary artery anomalies were included in the study. Anatomically, patients were classified into two groups: those with anomalies of origin and distribution and those with coronary artery fistulae. Clinically anomalies may be arbitrarily divided into benign and potentially dangerous.

The study identified 24 consecutive patients with isolated congenital coronary artery anomalies (0.6%). Of these 21 (87.5%) had anomalies of origin and distribution and 3 (12.5%) had coronary artery fistulae (Table I). Most of them were benign anomalies: a) separate origin of left anterior descending and circumflex from sinus of valsalva; b) ectopic origin of circumflex from right sinus of valsalva; c) anomalous origin of left main coronary artery from right coronary artery; d) anomalous coronary origin from ascending aorta; e) absent left circumflex; f) double right coronary artery; and g) small coronary artery fistula.

The clinician can suspect the presence of a coronary artery anomaly in a young person who experiences exertional syncope, myocardial infarction, exercise-induced arrhythmias or cardiac arrest<sup>1-4</sup>. Coronary angiography used to be considered in the diagnostic test of choice but recent advances in non-invasive Magnetic Resonance Imaging and other modalities of procedures made it the investigation of choice for anatomical and functional assessment of congenital and acquired cardiac conditions<sup>5</sup>.

**Table I:** Isolated congenital coronary artery anomalies in study population

	n	Incidence (%)	Anomalies (%)
Total coronary arteriogram	4,000	-	-
Total coronary anomalies	24	0.6	-
Anomalies of origin and distribution	21	0.75	87.5
Coronary artery fistulae	3	0.07	12.5

Anomalous origins of coronary arteries are rare in asymptomatic children, the prevalence is greater than that found in other prospective studies. Ischemia can occur with both ALMAC (anomalous origin of left main coronary artery) and ARCA (anomalous origin of right coronary artery) even though patients remain asymptomatic. Because of the high risk of sudden cardiac death, aggressive surgical management and close follow-up are necessary<sup>6</sup>. Abnormalities of the origin of coronary arteries with subsequent normal epicardial course relate to the anomalous location of one or both coronary ostia. These include the origin of LM, LAD, LCx, or RCAs from the pulmonary trunk, In addition, coronary arteries may originate directly from the left or right ventricles; the bronchial, internal mammary, subclavian, right carotid, or innominate arteries; or the aortic arch or descending thoracic aorta. High takeoff of the left or

right coronary ostia, defined as the location of the ostium of the left or right coronary artery more than 1 cm above the sinotubular junction has been described<sup>7</sup>.

In separate origin of left anterior descending artery and left circumflex (LCS) from the left sinus of valsalva (absent left main trunk), the left anterior descending (LAD) and left circumflex (LCX) arise from separate, but adjacent ostia in the left sinus of valsalva. This anomaly is found with increased incidence in aortic valve disease and dominance of the left coronary artery<sup>8</sup>.

Absent left circumflex is a large superdominant right coronary artery (RCA) crosses the heart where it ascends in the AV groove and perfuses the posterolateral and lateral wall of the heart. The LAD arises from the left sinus of valsalva and has normal distribution. This anomaly is benign in the absence of coronary occlusive disease.

Origin of left circumflex from right coronary artery is a very common anomaly. The LCX arises from the right coronary artery courses posterior to the aorta and provides branches to the left lateral wall of the heart. The LAD and RCA are normal. This anomaly should be suspected when contrast injection into left coronary artery reveals an unusually long nonbranching proximal segment and a nonperfused left lateral wall<sup>9</sup>.

Origin of left main from RCA is a very rare anomaly and one of the benign anomaly unless otherwise associated with coronary occlusive disease and we found only one such case in our study.

Double right coronary artery is extremely uncommon, and up to now, only nine cases have been reported. Duplication of coronary arteries is accepted as a benign pathology

Ectopic coronary origin from ascending aorta is suspected when the angiographer is unable to locate a coronary artery within the sinuses of valsalva.

Small coronary artery fistulae are benign and relatively common coronary anomalies. Most are single and drain into single recipient chamber. These fistulae generally do not result in signs, symptoms or complications<sup>10</sup>.

Coronary artery fistulae with large intracardiac shunts are rare potentially serious coronary anomalies in adults, since the majority are now detected and repaired in childhood. Fistulae draining into right sided heart chambers function as left to right shunts

and may result in right ventricular volume overload. Patients with large fistulae may present with a continuous murmur, exertional dyspnoea, effort intolerance or congestive heart failure. Symptomatic patients with large fistulae should undergo surgical ligation of the fistulae at the drainage site. In our study 3 patients were found to have large coronary artery fistulae.

In conclusion, this study shows that anomalous origins of the coronary arteries are rare.

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#### **Seroprevalence of HBs antibody among the newly admitted medical students in Bangladesh and seroconversion one year after vaccination**

Hepatitis B is an important infectious occupational hazard for medical and dental students. They are at a higher risk of hepatitis B virus (HBV) infection via minor skin-cuts and accidental needle-punctures during handling of infected patients and their body fluids. The risk varies during their career but is often the highest during their professional training<sup>1</sup>. The infected persons may not only go through immense sufferings because of this, but may also act as a potential source of infection to patients handled by them<sup>2</sup>. Because of this many hospitals have adopted a policy of not allowing HBV-positive caregivers in critical areas of medicare and screening for hepatitis B viruses before admission of students into their institution, followed by mandatory vaccination<sup>1-4</sup>. In Bangladesh, a simple medical check-up is performed before admission into a medical college. Besides general clinical examinations, such as pulse, BP and test for eye sight, only urine is examined for the detection of sugar and protein. Screening for blood-borne viral infection is not in practice.

The present study was carried out at the Department of Microbiology, Sylhet MAG Osmani Medical College during March 2007 to March 2008 to observe the awareness of newly-admitted medical students about HBV and their response after motivation for hepatitis B vaccination. After giving a brief introduction on the study, self-administered, questionnaires were distributed to 185 newly-admitted first-year students. Among them 108 (58.4%) voluntarily participated in the study. The respondents were aged  $18.84 \pm 0.77$  years. The awareness level about the hazards of HBV infection is 63.0%, about availability of vaccine was 88.9%; but about the modes of disease transmission it is quite low (6.5%).

Quantitative estimation of anti-HBs was done by ELISA using kits manufactured by Adaltis Italia (SPA), Italy. Antibody titre of  $<10$  IU/mL was considered as no protective immunity,  $10-100$  IU/mL as low protective immunity, and  $>100$  IU/mL as high protective immunity.