Transfusion associated GVHD: A case report
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Summary
Mr. Zahedul Islam, age 23 yrs, is a known case of Acute Myeloid Leukaemia (AML), presented with watery diarrhoea, nausea, vomiting and fever following 1 unit (450 ml) of fresh whole Blood Transfusion. On clinical examination he was found with mild rise of temperature, skin rash and in the laboratory findings pancytopenia was present. Clinically he was diagnosed as a case of transfusion associated Graft vs. Host disease (TA-GVHD) Later on, following irradiated blood transfusion (with 1500 rads) watery diarrhoea and other symptoms of GVHD did not develop.

Index word
TA-GVHD and irradiated blood unit.

Introduction
Graft Versus Host Disease (GVHD) frequently occurs after Bone Marrow Transplantation, but in the last two decades there has been an increasing incidence of GVHD following Blood Transfusion (TA-GVHD). It occurs between 4 to 30 days after

Transfusion and is severe with a mortality rate as high as 90% (Von Fliedner et al, 1982 London). Here we report a case of TA-GVHD possibly the first reported case in Bangladesh.

Case report
A diagnosed case of Acute Myeloid Leukaemia (AML) had been receiving

In the course of treatment patient was advised to receive irradiated fresh whole blood to avoid the above drastic complications of blood transfusion. Accordingly he got five units of fresh whole blood irradiated by 1500 rads (15 Gy) along with his routine chemotherapy in the following five weeks. No complication like diarrhoea, skin rash was observed which he experienced previously with non irradiated blood transfusion. Thus the patient was managed successfully.

Discussion
GVHD is a syndrome where foreign cells mount an assault on the tissues of the host after successful transplantation or engraftment¹. This syndrome is produced following successful engraftment of allogenic T lymphocytes or their precursors, if they are HLA incompatible². Particularly:

- In subjects with immature immunological system (parkman et al, 1974, UK).
- In subjects with impaired immunological system³.
- In patients with impaired immunological system by cytotoxic drugs⁴.

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Case Report

- In non-immunocompromized patients TA-GVHD may occur when the donor is homozygous for one of the patients HLA haplotypes.

Here in this case TA-GVHD occured in Mr. Zahedul Islam was due to cytotoxic drugs-as he has been on chemotherapy for AML.

TA-GVHD is under diagnosed because the syndrome usually affects patients who are already severely ill and the combination of symptoms may be wrongly attributed to underlying disease, intercurrent infection or severe reaction to a drug. Consequently the frequency of TA-GVHD is unknown. TA-GVHD occurred in one of 659 immunocompetent patients following cardiac surgery with transfusion of fresh blood in Japan.

Conclusion
Because of homozygosity for HLA haplotypes TA-GVHD is relatively frequent following non-irradiated blood transfusion. In order to avoid the risk of GVHD from transfusion of blood to the patients with immunological deficiency, the blood/ blood products should be treated with 1500 rads (15 Gy) before being transfused. This dose of radiation abolishes the response of lymphocytes in mixed lymphocyte culture. Incidentally the dose of radiation required to impair red cell survival is far greater than this, 35000 rads (350 Gy) or more (Schaffer et al, 1966). When first degree relatives are used as a donor irradiation of blood has been advised, even in recipients who are not immunocompromized (AABB, 1989) although everyone does not support this view (Avoy, 1990).

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