INTRODUCTION

Neoadjuvant radiotherapy (RT) is now commonly recommended to many patients with rectal cancer as it leads to a reduced local recurrence rate\(^1\)\(^-\)\(^6\) and improved overall survival.\(^1\)\(^-\)\(^7\) Radiotherapy helps in downsizing and downstaging of the primary tumor which may increase sphincter preservation although this is controversial.\(^9\) A conventional, long course RT schedule (approximately 50 Gy over 5 weeks) combined with chemotherapy results in downstaging.\(^8\)\(^,\)\(^10\) In three retrospective\(^11\)\(^-\)\(^13\) and one prospective studies,\(^14\) short course RT induced downstaging, if surgery was delayed for more than 4 weeks. We present a rare case of a young rectal cancer patient with Takayasu’s Arteritis treated with short course radiotherapy without any morbidity.

CASE REPORT

A 28 years old female with no known comorbidities presents with complaints of bleeding per rectum for 2 months duration. Per rectal examination revealed ulceroproliferative polypoidal growth with a large base starting 2.5 cm from anal verge till 6 cm between 5 and 2 'O' clock position. The lower border is around 0.5 -1 cm above the anorectal ring. Her hematological and biochemical parameters were normal except serum CEA 47.8ng/ml.

Magnetic resonance imaging revealed (Fig.2) revealed low rectal cancer just extending to middle 1/3 of the rectum. Mesorectal fascia threatened by the node. Intersphincteric groove was normal except rectal growth.

The patient was staged as carcinoma of rectum T2/3aN1Mo with Takayasu’s Arteritis treated with neoadjuvant short course radiation under cover of Low molecular weight Heparin (LMWH) and Aspirin. Fig.4 shows radiation dose distribution. Patient completed radiation and delayed surgery without any morbidity. Now planned

ABSTRACT

Neoadjuvant radiation is used nowadays to many patient with rectal cancer as it lead reduce local recurrence and improve the overall survival. It can be done with conventional long course radiation with chemotherapy which induce down staging/downsizing the primary tumor. Some studies shows short course radiation followed by delayed surgery more than 4 weeks also induce down staging/downsizing the primary tumor. Patient with collagen vascular disease like Takayasu’s Arteritis exhibit reduced tolerance to radiotherapy. We present a rare case a young rectal cancer patient with Takayasu’s Arteritis treated with short course radiotherapy without any morbidity.

KEYWORDS: Neoadjuvant, Rectal cancer, Takayasu’s Arteritis, Radiation
for adjuvant chemotherapy.

Fig-4-RT dose color wash

DISCUSSION
Takayasu’s arteritis is a collagen Vascular disease. It is characterized by stenosis of large blood vessels like aorta and its main branches as a result of inflammation. 15 Diagnostic criteria includes onset less than 40 years, limb claudication, decreased brachial artery pulse ,unequal BP>10 mmHg, Subclavian (or ) aortic bruit and angiographic evidence of narrowing or occlusion of aorta or its branches.Three out of six criteria usually clinches the diagnosis of Takayasu’s Arteritis.

It is usually thought that patients with collagen vascular disease like Takayasu’s Arteritis exhibit reduced tolerance to RT due to injury to micro vessels exacerbated by radiotherapy, 16,17There are currently many reports regarding acute and late toxicities of radiotherapy in patients with collagen Vascular disease with cancer .18-22 But currently no definitive guidelines available for administering radiotherapy in such case , including the total dose , dose per fraction, age of the patient and so on. Indication of the radiotherapy, total dose, dose per fraction and duration should be individualized in each patient with collagen vascular disease.

There is one report available in a patient with Takayasu’s Arteritis who developed orapharyngeal cancer. 23 Here patient treated post-operative radiation with total dose 68 Gy to primay and 64 Gy nodal region under cover of aspirin and dipyrimadole. Ten month after the follow up, patient had no untoward vascular sequel from radiotherapy.

Another report a 67 years old male developed keloid over the chest wall post bypass surgery for Takayasu’s Arteritis .24 Treated with excision with flap cover followed by post operative radiotherapy 20 Gy with electron. Patient developed grade III skin reaction on thirty seven days of post operation and treated with topical steroid.

Short course radiotherapy usually performed with total dose 25 Gy over 5-7 consecutive days.25 Here we performed with total dose 30 Gy in 10 fraction over 2 weeks intended to avoid the acute and late toxicities of radiation with under cover of LMWH and aspirin. Patient completed radiation and delayed surgery without any morbidity.

CONCLUSION
Although radiation may lead to many acute and late toxicities in a patient with Takayasu’s Arteritis with cancer, by individualizing the total dose, dose per fraction, duration and under cover of the aspirin and LMWH, is appropriate and safe

REFERENCES