

## Case Report

### 'Emergency Chemotherapy' for Bleeding Cervical Cancer: Case Series

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#### Abstract

Fulminant haemorrhage in cervical cancer leads to severe anaemia and haemodynamic instability. Palliative management includes vaginal packing as temporary measure, radiotherapy and other invasive surgical procedures. High dose emergency chemotherapy is not commonly implemented particularly when complicated with anaemia and renal impairment. We discuss three case series on the usefulness of high dose chemotherapy to combat bleeding from cervical cancer as an emergency treatment. The first case was clinically staged as operable 2A disease with severe anaemia due to bleeding from the tumour mass. The haemoglobin was corrected by blood transfusion while the bleeding was being arrested by high dose chemotherapy. The second case was inoperable with invasion to the bladder mucosa. She had frank haematuria and bleeding from the tumour with severe anaemia. A course of chemotherapy and blood transfusion controlled the bleeding and anaemia was corrected. The third case presented late with obstructive uropathy and anaemia. She required dialysis, blood transfusion and high dose emergency chemotherapy to stop the bleeding before undergoing urinary diversion after an unsuccessful ureteric stenting. High dose chemotherapy consisting cisplatin, vincristine, bleomycin and mitomycin-C has a clinical value in arresting fulminant haemorrhage in cervical cancer.

**Keywords:** Palliative, chemotherapy, cervical cancer, bleeding, bleomycin

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#### Introduction

Even though the incidence of cervical cancer shows a downward trend in many developed countries resulting from effective preinvasive cervical screening and vaccination, yet advanced disease is still not uncommon in developing countries (1).

Urinary system is commonly affected due to close proximity to cervix and ureters running in the parametrium, approximately two centimeters from the cervix before entering the bladder. Lateral tumour extension-encasing the distal ureter leading to hydroureter, hydronephrosis and finally renal

impairment. The prognosis is guarded with median survival of three to seven months (2).

Bleeding from the tumour can be torrential and difficult to arrest causing haemodynamic instability to the extend of death. Vaginal packing with Monsel solution works temporarily especially in non massive haemorrhage. Radiotherapy and brachytherapy are commonly used not only for definitive treatment in early stage but also palliative measures to stop bleeding. Other options could be embolization of the uterine arteries, ligation of feeding vessels, surgical resection and stereotactic radiosurgery, with varying successful rate and availability (3).

Generally chemotherapy is administered singly in advanced cervical cancer or as neoadjuvant in inoperable or bulky tumour. Chemotherapy is not particularly used as a rescue measure to stop bleeding as it is theoretically time consuming and relatively contraindicated in anaemic patients. More so, in uropathic patients where poor clearance is anticipated, it is not an advisable option. To date there is no report published on the evaluation of clinical benefits of high dose chemotherapy in emergency situation to arrest bleeding from the tumour.

### Case Report

#### Case 1:

A 48-year-old, grandmultipara presented with prolonged per vagina bleeding for three weeks. It was associated with anaemia and constitutional symptoms. She was previously healthy, with six previous normal vaginal deliveries. She never had any Pap smear done. Assessment revealed a fungating cervical mass 7x8cm with contact bleeding. It has involved the upper half of the vaginal wall and both parametria were thickened. The renal function was acceptable but she was severely anaemic with haemoglobin of 4 g/dL. She was transfused with four units of blood, but the bleeding persisted. As radiotherapy was not readily available to arrest the bleeding, a course of chemotherapy (cisplatin, vincristin, bleomycin and mitomycin C) was administered with an excellent result. The bleeding finally stopped and two weeks later, haemoglobin improved to 10 g/dL. The tumour shrunk to 3x5 cm and the second course of chemotherapy was administered before the tumour became operable.

#### Case 2:

A 39-year-old, multipara presented with abnormal vaginal bleeding for one month, associated with lower abdominal discomfort. She also had intermittent haematuria. She was pale with haemoglobin of 5 g/dL. There was oozing of blood from the vagina with an exophytic growth occupying the upper half of the vagina. The friable tissue obtained confirmed squamous cell carcinoma with extension to bladder mucosa. The bleeding continued and she was persistently anaemic despite of four units of blood transfusion. Emergency palliative chemotherapy (cisplatin, vincristin, bleomycin and mitomycin C) was administered with spontaneous remission of the bleeding.

#### Case 3:

A 45-year-old, nulliparous, presented with anuria and ureamic symptoms. She had history of persistent per vaginal bleeding since three months prior to the presentation but did not seek any medical advice. She was dehydrated and pale. A contact bleeding of 5x5

cm exophytic growth occupying the upper two third of vagina was confirmed to be adenosquamous cervical carcinoma. The haemoglobin was 4 g/dL and blood gases revealed metabolic acidosis. Serum urea and creatinine was 15 mmol/L and 150 mmol/L respectively. Ultrasound kidney, ureter and bladder revealed bilateral hydronephrosis. Vaginal packing failed to arrest the bleeding from the tumour. Concurrent haemodialysis and chemotherapy were administered to arrest the bleeding while packed cells were being infused. The patient and relatives were made aware of the high risk and possible benefits from the chemotherapy at this emergency situation. The bleeding had stopped following the chemotherapy and she was subjected to bilateral ureteric stenting, which however was not successful, requiring bilateral uretero-neocystotomy to divert the blockage.

### Discussion

Bleeding cervical cancer is not uncommon and could happen at various stages. Nevertheless, it occurs frequently in the advanced stage of a bulky tumour. At the operable stage, management issue is less contentious as either chemoradiation or radical surgery following correction of anaemia is the optimum approach. Bleeding at advanced stage requires palliative measures to stop the bleeding for improvement of patient's general wellbeing. Palliative pelvic radiotherapy induces tumour necrosis, regresses its growth and arrests the bleeding (4). This particularly is applicable in the centre where radiotherapy facility is widely available, however this is debatable in those poor resources units. Is there any role of emergency chemotherapy to stop the tumour bleeding? There is very limited data discussed on this issue, in fact no proper randomized controlled trial to assess its efficacy, safety and outcomes.

The three case series illustrated the benefit of 'emergency chemotherapy' in term of palliative measures in order to arrest bleeding from a tumour, besides its renowned effect as neoadjuvant modality before radical surgery is made possible.

In clinically fit patients, chemotherapeutic agents are generously administered without much concern of its' side effects and clearance, but those with renal impairment from tumour compression have created uncertainties. Further deterioration is anticipated if slim chance of recuperation does not occur. The three case prove proactive management which included correction of anaemia, haemodialysis with concurrent chemotherapy given had stopped the bleeding, shrunk the tumour mass and further intervention was made possible. Obstructive uropathy which most commonly

implicated with cervical malignancy is reversible if timely intervention with the introduction of chemotherapy. In severe renal parenchymal disease, chemotherapy is deemed dangerous and life threatening with contraindication especially of those with cortical thickness of less than 13mm (5). Hence, proper individualized assessment is indeed mandatory before instituting treatment on top of comprehensive counseling.

Many case reports demonstrate ureteric stenting before chemo radiation in patients with hydronephrosis, showed no deterioration in renal function yet it is an effective procedure (6,7). It is of more concern when the tumour bleeds in obstructive uropathic patients? Obviously arresting the bleeding is the priority where failure of doing so will jeopardize the lives of these women. Hence the use of high dose chemotherapy (bleomycin, vincristine, mitomycin and cisplatin) is found to be effective to combat the bleeding, while dialyzing the patient to prevent further deterioration of renal function. Ureteric stenting or even diversion could be later performed once it is feasible.

### Conclusion

High dose 'emergency chemotherapy' has a proven role in arresting bleeding cervical cancer of various stages even in an advanced disease with obstructive uropathy, with concurrent dialysis before urinary diversion.

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