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LIMB-SAVING MANAGEMENT OF ANGIOSARCOMA OF THE LEG WITH UNANI POLYHERBAL DRESSING: A RARE CASE REPORT

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Abstract

Introduction:

Angiosarcoma is a rare, aggressive malignant tumour arising from vascular endothelial cells. Due to its infiltrative nature and high metastatic potential, it carries a poor prognosis and often requires radical surgical intervention such as limb amputation. Postoperative non-healing ulcers are a known complication, particularly when tumour excision involves large soft-tissue defects. Conventional dressings may fail to achieve satisfactory healing in such cases.

Case Presentation:

A 23-year-old male presented with a progressively enlarging swelling on the medial aspect of his left lower leg for six years, with recent rapid growth, pain, and bloody discharge. Clinical, radiological, and histopathological findings confirmed a diagnosis of angiosarcoma. Multiple hospitals advised below-knee amputation, but a limb-saving wide excision was performed at our centre under oncological supervision. One month postoperatively, the

patient developed a non-healing ulcer that did not respond to standard modern wound-care measures.

Intervention:

A Unani polyherbal formulation described in *Al-Qanoon fi al-Tibb* (Ibn Sina), containing *Aamba Haldi* (Curcuma longa), *Aloe vera*, *Mur Makki*, and *Mazoo*, was initiated as a topical dressing. These ingredients possess anti-inflammatory, antimicrobial, astringent, and tissue-regenerative properties (Mdammil-e-Qurooh, Mujaffif, Habiss-ud-Dam, Munabbit-e-Laham, Daaf-e-Taffun).

Outcome:

Over successive dressings, the ulcer showed marked improvement in granulation, reduction of discharge, and progressive epithelialization. Complete healing was achieved without complications, and limb integrity was preserved.

Conclusion:

This case highlights that Unani polyherbal dressing may serve as an effective, safe, and economical option for managing non-healing ulcers, particularly when conventional wound therapies fail. Integrating Unani formulations into surgical oncology may offer significant benefits in selected cases of soft tissue malignancies.

Keywords: Angiosarcoma excised, Post-Wide excision non-healing ulcer, Non-healing ulcer, Unani medicine, Polyherbal formulation, Wound healing, Case report.

1. INTRODUCTION:

Angiosarcoma is a rare, highly malignant tumour arising from vascular endothelial cells. Also called angioendothelioma. [1] Through blood and lymphatic flow, these tumours can metastasise to distant sites, particularly to the liver and lungs. Angiosarcoma shows signs of haemorrhage and necrosis. Pathologically, tumour cells exhibit an increased nuclear-to-cytoplasmic ratio, nuclear hyperchromasia, nuclear pleomorphism, and high mitotic activity. Angiosarcoma of the liver, a rare fatal tumour, has been seen in workers intensively exposed to the gas vinyl chloride monomer (VCM) for prolonged periods while working in polyvinyl chloride (PVC) polymerisation plants. It has also been associated with individuals exposed to arsenic-containing insecticides and Thorotrast. [2]

2. CASE REPORT:

A 23-year-old male patient came to the surgery OPD of the National Institute of Unani Medicine in March 2018, with a chief complaint of swelling over the left lower leg for 6 years. Initially, the

swelling was minimal, the size of a pea, but over time, it gradually increased. However, over the last two years, its growth has accelerated rapidly. Last month, a patient felt pain due to the swelling. Over the previous 15 days, the patient had noticed bloody discharge from the swelling. There is no history of any trauma and no association with fever and weight loss. There is no relevant family history. His father died due to liver failure. No history of diabetes mellitus, hypertension, pulmonary tuberculosis, bronchial asthma, etc. No history of previous operations. No history of any drug or food allergy. The patient was unmarried and had passed higher secondary school. He belonged to the lower middle class. His bowel habit and micturation were normal. But his sleep and diet decreased in two months. There was no history of active medication. General physical examination revealed no major illness, such as Icterus, pallor, oedema, or pigmentation.

Vitals were within normal limits with normal systemic examination findings. Local examination revealed that one approx. A 10 x10 cm-sized globular swelling was present on the medial aspect of the left lower leg just above the medial malleolus. The base of the swelling was smaller. Scaling and minute yellowish-red-coloured discharge were observed on the skin present over the swelling, and blackish discolouration was also present, with redness or oedema around the swelling. On palpation, local temperature was slightly raised, and tenderness was present. The swelling was firm, with tense and shiny skin over it. Swelling was slightly movable, not fixed with the underlying bone. Not free from the overlying skin. No visible pulsations and dilated veins.

Figure 1: Angiosarcoma at left lower limb

He came to our hospital with the following reports. He was previously diagnosed with angiosarcoma, and many hospitals had advised him of amputation of the left leg below the knee joint.

2.1 Laboratory investigations

Complete Blood Count (Dated=23/2/2018)	
Haemoglobin	12.3 gm/dl
PCV	38.0%
RBC Count	5.10 Million/mm
MCV	74.0 fl
MCH	24.0 pg
WBC	3.0 g/dl
Neutrophils	62.0 %
Lymphocytes	25%
Monocytes	10 %
Eosinophils	3.0%
Basophils	0.0 %
Platelet count	3.41 lakhs/cumm
Bleeding time	2 minutes
Clotting time	4 minutes
Serology and Immunology	
HbsAg	Negative
HCV	Negative
HIV I& II	Non-Reactive
Random Blood Sugar	135 mg/dl
Serum electrolytes	
Sodium	138mmol/dl
Potassium	3.6 mmol/dl
Chloride	104 mmol/dl

Renal Function Test	
Blood urea	12 mg/dl
Serum creatinine	0.6 mg/dl
Liver Function Test	
Total Bilirubin	0.4 mg/dl
Direct Bilirubin	0.0 mg/dl
Indirect Bilirubin	0.4 mg/dl
Total Protein	6.8 g/dl
Albumin	3.7 g/dl
Globulin	3.0 g/dl
A/G ratio	1.3
Alkaline phosphatase	131 U/L
SGOT/AST	11 u/l
SGPT/ALT	11 U/L

- **Ultrasound** of the soft tissues of the left leg revealed a Well-Defined, heterogeneous lesion with few necrotic areas within, measuring ~8.8 x 7.0 x 8.5 cm, noted in the medial aspect of the lower one-third of the leg.

  Neoplastic.

- **An ultrasound scan of the abdomen** revealed no significant abnormality.

- **ECG** showed a Normal study

- **Biopsy**: Microscopic Examination revealed a cellular spindle-cell neoplasm with moderately high mitotic activity and acute inflammatory response. The tumour cells are arranged in fascicles as well as haphazardly. The cells are spindle to plump to oval with moderate cytologic atypia, vesicular chromatin and inconspicuous nuclei with a scant to moderate amount of cytoplasm.

2.2 Diagnosis: Final diagnosis was angiosarcoma of the left leg.

2.3 Treatment:

After careful study of all investigations, we decided to perform a limb-saving surgery, i.e. wide excision of the mass under spinal anaesthesia under the guidance of an oncologist surgeon. During Excision, bleeding vessels were ligated with non-absorbable sutures (Vicryl 2/0) and divided with electrocautery. After excision, dressing was done with sterile gauze and pads. Proper cleaning and dressing were carried out on every fifth day with Betadine ointment.

Figure 2: During Wide Excision

Figure 3: Excised Mass inner surface

Figure 4: Excised mass-Outer Surface

Figure 5: Non Healing ulcer with slough

After one month, we noticed that wound healing was in slow progress. We had tried most of the topical agents known in modern medicine, but the ulcer failed to heal. Local Examination revealed that the ulcer became callus and eges were fibrosed with a floor filled with unhealthy pale granulation tissues. The ulcer was elliptical with a size of 8cm long and 7cm wide. Ulcer was non-tender and did not bleed on touch. A slight smell of slough was there.

2.4 Methodology:

Then we started dressing the wound with an Unani polyherbal formulation that mentioned in the famous Unani literature named Al-Qanoon Fi-tib by Ibn-e-Sina.[3]

That formulation is based on some Unani drugs that were fine powdered and sprinkled over that ulcer after cleaning with normal saline. The ulcer was then covered with sterile dressing. We repeated the cleaning and dressing after every 48 hours.

2.5 Result:

In this case report we noticed visible signs of healing after second dressing. The result of this case is confidence instilling. After the complete healing of the ulcer patient was instructed to report for follow-up fortnightly for 3 months. There was no evidence of recurrence of the ulcer and tumour.

Fig 5: Application of Unani Formulation

Fig 6: Ulcer after two dressings

Figure 7: Healing After Unani dressing

Figure 8: Ulcer completely healed

3. Discussion

Angiosarcoma is a rare and aggressive malignancy that often has a poor prognosis, even after surgical excision. [1][2][4][5]. Non-healing ulcers following surgery for angiosarcoma are a significant complication and can be difficult to manage with conventional therapies such as antibiotics, debridement, or advanced dressings, especially when standard treatments fail or are too expensive.[6][7][8].

Polyherbal Unani formulations have demonstrated promise in wound healing, especially in chronic and non-healing ulcers. [7][8][9][10]. The ingredients in this case—*Aamba Haldi*, Aloe vera, *Mur Makki*, and *Mazoo*—are known to possess anti-inflammatory, antimicrobial, and regenerative properties.[3][11][13] Curcuma longa (*Aamba Haldi*) has been shown to reduce inflammation and enhance microbial eradication, while Aloe vera supports collagen synthesis, fibroblast proliferation, and granulation tissue formation.[12][13][14] *Mazoo* and *Mur Makki* further aid tissue regeneration and act as antiseptics [9][11][15], with properties such as Mdammil-e-Qurooh, Mujaffif, Habiss-ud-Dam, Munabbit-e-Laham, and *Daaf-e-Taffun*. [16] [17] [18] [19]

Multiple case studies and preclinical investigations have reported successful healing of non-healing ulcers using such Unani polyherbal dressings—even in cases with chronic infections, the presence of maggots, or slow epithelialization [7][8][9][10].

4. Conclusion

This case underscores the importance of prioritizing organ-preserving surgery over amputation whenever it is safely feasible. Unani polyherbal powder dressing may offer an effective, safe, and affordable alternative for the management of non-healing ulcers when standard therapies are not effective. The combination of *Aamba Haldi, Aloe vera, Mur Makki,* and *Mazoo* worked synergistically to reduce inflammation, lower microbial load, and promote tissue regeneration, resulting in successful ulcer healing.

Conflict of Interest: The authors report no conflict of interest.

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