

Letter to the Editor

Challenges in the administration of hyperbaric oxygen therapy (HBOT) for complicated cases in a tertiary care setting

We are writing to share insights from a recent clinical case involving a 65-year-old female patient who presented with osteoarthritis of the left knee and underwent genicular artery embolisation under general anaesthesia. Following the procedure, she developed compartment syndrome, necessitating fasciotomy. To aid her recovery, a multidisciplinary approach was employed, including serial debridement and daily hyperbaric oxygen therapy (HBOT) sessions of 90 minutes, intended to optimise wound healing and minimise infection risk.² We also managed a 32-year-old female case of abdominal wall dehiscence, where the patient underwent HBOT and vacuum-assisted closure followed by split thickness skin grafting. The patient ultimately made a full recovery. In both patients we encountered a number of operational and administrative challenges during their HBOT treatment that are worth discussing for the benefit of clinical practice and institutional improvements.

Challenges and administrative issues

STAFFING CONCERNS

One of the primary administrative issues observed in both patients was the lack of female attendants and nursing staff to assist with the patient during her HBOT sessions.¹ This may often be the case in hyperbaric units based in military establishments. As the patient was a female, the absence of appropriately trained female staff in the chamber raised significant concerns regarding comfort, privacy, and emotional well-being. This is an area where our healthcare facility could improve by ensuring that adequate, trained female staff are available to support female patients undergoing HBOT.

Measures taken: We motivated female staff ward sahikas (multipurpose health workers) to accompany the patient in and out of the facility and to help them in their personal activities i.e., in going to washroom, transferring them in and out of the chamber. However, they did not enter the chamber as they were not trained in this regard.

PATIENT MOTIVATION AND COMPLIANCE

During the initial phase of HBOT, the first female patient experienced difficulty in remaining in the chamber for the full 90-minute duration. Convincing the patient to comply with the required treatment time posed a psychological barrier,^{2,3} which we addressed through motivational counselling and teaching relaxation techniques such as Valsalva manoeuvres. However, motivating the patient to extend her time gradually to the 60–90-minute target

required persistent encouragement from the medical staff, indicating the need for more effective patient education protocols.⁴

Also explaining to the patient about the possible side effects and complications of HBOT in a thorough yet non-threatening manner was a delicate task as even some other speciality doctors involved in her case had apprehensions about HBOT.

Measures taken: Frequent counselling and communication by senior consultants and diving staff for the patient and her medical officers was undertaken. To allay the apprehension of the patient, we chose a dive attendant from the same state and of the same religion to help with therapy acceptance.

There are no widely accepted protocols for such a case being subjected to HBOT and rare citations are available in literature. The entire department of marine medicine met under the guidance of the Head of Department (HOD) to design an appropriate protocol for administering HBOT with the aim of safely maximising benefits.

STAFF ENGAGEMENT AND ENTHUSIASM

While these challenges were notable, it is important to recognise the importance of enthusiasm and dedication shown by both medical and non-medical staff in attempting to meet the patient's needs.⁵ The multidisciplinary team collaborated closely to ensure optimal care, but the logistical issues highlighted above remain important areas for improvement.

Conclusions

The case of these two very ill female patient underscores not only the clinical benefits of HBOT in managing complex surgical outcomes but also the operational and administrative challenges that can hinder its successful implementation. Our experience emphasises the need for healthcare teams to also be mindful of cultural dynamics and to implement better staffing protocols, patient communication strategies, and operational adjustments that are sensitive to gender and cultural background. Addressing these issues would allow healthcare facilities to provide more efficient and compassionate care, ultimately improving patient outcomes.⁵

We hope that sharing these experiences will stimulate further discussion and improvement, particularly in scenarios involving sensitive gender and cultural issues.

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