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OPEN REDUCTION AND INTERNAL FIXATION BY A TRADITIONAL BONE SETTER AND QUACKS - A CASE REPORT AND REVIEW OF LITERATURE

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ABSTRACT:

Open reduction and internal fixation of fractures is surgical procedure guided by standard principles and often performed by Orthopaedic specialists. Unfortunately, some quacks now dabble into performing these complex procedures resulting in several complications. However, it has becoming a serious public health concern in that a traditional bone setter in collaboration with some health workers (quacks who were community health extension workers) engaged in performing an open reduction and internal fixation for a femoral fracture in our index patient with very severe complications. We present this case of open reduction and internal fixation by traditional bone setters and quacks to illustrate the extent of malpractices by traditional bone setters aided by quacks who have either been assisting Orthopaedic surgeons in the theatre or have been watching these procedures as they are frequently been carried out in the operating room.

This index patient, a university undergraduate presented via our outpatient clinic having been mismanaged by a traditional bone setter in collaboration with a Community health extension work. An informed consent was duly taken from the patient concerning the reporting of the case and he was fully clerked, investigated and managed until he left against medical advised due to financial constraints.

We strongly recommend legislation and enforcement of laws that restrict traditional bone setters to limit their practices within their capacities under supervision if they must be allowed for any reason to practice management of simple fractures. The Community Health Extension Workers(CHEW) are to be under strict regulation by the Medical councils to prevent this unwholesome practices.

Key Words: *Open reduction, traditional bone setters, quacks*

INTRODUCTION:

Open reduction and internal fixation (ORIF) is a frequently used for the treatment of fractures in the body, including the proximal femur¹.

Closed Fractures of the femur will require internal fixation which must be performed by a trained specialist. Though as specialized as the procedure is the traditional bone setters and quacks have been bold to dare these procedures with very severe complications. This case is unique in that there was a collaboration between the traditional bone setter and community health extension workers(quacks). The menace caused by the activities of traditional bone setters has continued to be a serious concern to Orthopaedic surgeons. However, the

traditional bone setters are still being patronized by all categories of persons ranging from the illiterate to the highly educated ones².

CASE REPORT

A 28years old male, UUE, final year student of the University who presented with a 2year history of inability to bear weight on the right lower limb and eight (8) months purulent discharge from the right thigh.

Patient was a passenger on a motorcycle that was hit by a fast moving vehicle, he fell to the tarred road hitting his right lower limb and was pulled from under the vehicle noticing inability to bear weight on the limb with associated pains which was severe radiating to the hip and leg, aggravated by any movement of the limb with no means of relief at that point of injury. There was also swelling with deformity on the right thigh, he bled profusely from a large sized wound on the same thigh which led to loss of consciousness and he woke up to find himself in the traditional bone setter(TBS) centre where his wound was bandaged and intravenous fluids and pain relief were administered. He was later counselled for surgery by the traditional bone setter with assurance that a metal will be used to stabilize the fracture, a week later surgery was performed with the help of the community health workers who worked at the community health centre.

Six(6) days post -surgery he had severe wound infection which was treated there by the TBS and was later discharged home with crutches over a year later with inability to walk.

Eight months ago he slipped and fell on the same limb with consequent protrusion of the implant and several screws falling off the wound site with copious purulent discharge from the thigh. He was then managed by patent medicine dealer with reduced discharge but more of the implant was protruding from the thigh and more screws falling from the wound site.

Having spent so much and had no more cash for further treatment, the community members came to their help and brought patient to the hospital for proper management.

At presentation, he was on bilateral axillary crutches, pale afebrile, anicteric, acyanosed, right inguinal lymph nodes enlargement and no pedal edema.

The right thigh was bandaged with an implant protruding from the bandage and bone spicules beneath the implant.

On exposure of the wound, purulent discharge from the wound, bone spicules seen beneath the implant, hyperpigmentation around wound site, surgical scar proximal to the wound.

Chest was clinically clear,abdominal examination showed no palpable masses. The lower limb examination revealed marked reduction in muscle bulk in the thigh and leg with differential warmth and tenderness around the implant. A limb length discrepancy(LLD) of 12cm was noted between the right(R) and the left (L)lower limb with R<L. Range of movement markedly reduced across the hip and knee joint demonstrating severe stiffness at the knee joint. Sensation were intact in all dermatomes and distal peripheral pulses palpable.

Laboratory investigation showed a PCV of 20%, WBC of $7.0 \times 10^9 /L$. Wound swab yielded *Staphylococcus aureus* and *Pseudomonas aeruginosa*. Xray of the affected femur showed Loosening of plate & screws, bone loss in proximal femur at fracture site with gap of 4 cm,

tapered ends of proximal distal segments, marked osteopenia, marked reduction of hip joint space and greater trochanter abating on acetabular rim.

Based on the above, a diagnosis of infected atrophic non-union with bone loss of proximal Right femur with exposed implant was made.

Treatment included antibiotics based on sensitivity result, regular dressing of wounds, alendronate and analgesics.

Definitive treatment was staged procedure as follows:

Stage 1: removal of implant debridement and antibiotic impregnated bone cement.

Stage 2: Debridement, application of Linear rail system(LRS) for bone transport. But after the initial treatment patient could not afford further treatment and left against medical advice.



Fig 1: exposed implant on the right femur.



Fig.2 xray showing the loose implant and bone loss

DISCUSSION:

The history of traditional bone setting can be traced to the era when modern homo sapiens engaged in hunting resulting in injuries and sometimes fractures. In the process of time, man has attained some level of mastery in the management of fractures and related injuries, giving room to specialization in complex fracture management³.Fractures of proximal femur is between the cervical region and the shaft and the subtrochanteric fracture, with a

fracture line running from an area within 5 cm distal to the lesser trochanter, is usually also included in the definition⁴. These fractures usually pose a serious challenge in management even to the best trauma Surgeon due to strong opposing forces of the muscles around the fracture especially the subtrochanteric fractures⁵. Unfortunately, the traditional bone setters have always delved into the management of all forms of fractures without considering the challenges and eventual complications, this is largely due to their lack of knowledge of human anatomy, physiology and even prevention of infection and the use aseptic technique in surgical procedures^{6,7}. However, their patronage is still on the increase cutting across all ages, race, sex and educational attainment⁸. The index case, is a case of a final year university student who ordinarily should be considered knowledgeable enough to have refused being attended to by such untrained persons, but became a victim of their unwholesome practice because of poverty and some cultural beliefs⁹. A combination of untrained health personnel collaborating with traditional bone setters is gradually emerging and features of quackery are often demonstrated in their injudicious massages, poor diagnosis and misplaced treatment resulting in very unpleasant complications like nonunion, malunion, delayed union, sometimes outright gangrene of the limb because of vascular compromise¹⁰.

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