

THE EVOLVING SUB – SAHARAN EXPERIENCE – TOTAL KNEE REPLACEMENT.

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ABSTRACT OF PAPER:

Objective. Prospects of Total Knee Replacements in Sub-Saharan Africa.

Two thirds of the world's population of about six billion live in the developing world. The majority of African countries fall within this category. These countries suffer from lack of access to good primary health care. In 2001, injuries accounted for about 5.1million deaths (about 20% of which are preventable by simple surgical intervention) and about 12% of the disability-adjusted life years lost worldwide which was more than that lost because of tuberculosis (2.5%), diarrhoea (4.3%) and malaria (2.9%), human immunodeficiency virus (6%) or cancer (5.2%). The worldwide leading cause of death among young life between 5 and 40 years is injury. Yet, the world's focus, although important, remains skewed on the care of communicable diseases, malaria, HIV / AIDS and nutrition. For chronic orthopaedic trauma related conditions in sub-Saharan Africa only those who can afford western style treatments fly out to receive treatment elsewhere. Increasingly, trauma is becoming a major cause of morbidity and mortality in poverty stricken sub –Saharan African countries like Ghana. Perhaps re-directing funds from individuals who could afford the treatment if available in their own locality to support low cost but effective orthopaedic trauma care could be a strategy to re-dress the orthopaedic trauma care in sub Saharan Africa while at the same time supporting a scheme to invest in the local healthcare resources.

Charity and voluntary health organizations have attempted to help alleviate the problem associated with orthopaedic-trauma / health care in the developing world and most have based their projects on foreign sponsored projects that waxes and wanes with the enthusiasm of the organisations and their funds. Most have been reluctant to introduce any projects that will cost the foreign sponsor too much money and there has been considerable difficulty in trying to improve local services in sub-Saharan Africa to provide high technology orthopaedic trauma services with few exceptions like the scheme by Professor John Jellis FRCS, OBE in Zambia in which he provides free clinical services to paediatric patients with musculo-skeletal deformities from income generated from the local affluent society's joint arthroplasties.

Motec Life – UK (Motec) is a multi-disciplinary charity organization based in the United Kingdom looking at developing a self sustaining Orthopaedic Trauma Care in the developing countries like Ghana. So far, it is based on income generated from high-technology orthopaedic surgery and international support to provide some low cost but effective treatment for a targeted population. This is being approached with multi-disciplinary team visits providing education, transfer of skills to local health workforce which in turn provides reciprocal experience to the Western based health worker in many difficult clinical scenarios in our countries of residence and some medical conditions afflicting the minority ethnic population in the western world.

In 2005, recorded primary total knee joint replacements in England and Wales was over 59,000 and many papers have been published on outcomes of total knee arthroplasties in the developed world. There is very little published literature on the outcome of knee arthroplasty in Africa although such operations are being carried out in countries like South Africa, Malawi, Zambia and some Northern African countries. Motec's observation about current practices in Ghana shows that conservative treatment for osteoarthritis will be the first choice for many and at the other extreme, fusion of the knee with unlocked intra-medullary nail may be the most affordable surgical option in a harsh environment where support for rehabilitation is non-existent. We know from our work in Ghana that bilateral knee osteoarthritis do present to clinicians. Most patients with osteoarthritis of the knee visit the hospital for treatment when the condition is quite advanced. We could not imagine the kind of life a patient would enjoy with bilateral fused knees. Although high tibial or double knee osteotomies seem to involve very minimal surgical cost, the skills to perform and manage them remains under patronised. It will be clear that the prolonged rehabilitation period after osteotomy seem to be a big challenge in an environment where most of the patients although young, have a relatively low life expectancy and that there is almost total lack of support services for activities of daily living home adjustments and mobility for patients, as compared to the developed world. Appropriate implants as developed for the Asian market could be of use in emerging economies in Africa that could support early mobilisation and return to economic activities.

In this article, we report a series of seven patients who underwent 8 primary knee arthroplasties in a private setting in Accra, Ghana. The overall objective is to help project the view on the prospect of knee joint arthroplasty in developing Africa.