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## REVIEW ARTICLE

### ILLEGAL COPPER MINING ACCIDENTS IN CHINGOLA: A CASE REPORT

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#### ABSTRACT

Chingola is a mining town and the mining activities have been going on for a long time. It was founded in 1943 when the Nchanga Mine was started up. It is a town in Zambia in the province of the Copperbelt. In terms of development, Chingola is rated as the 5th most developed cities in Zambia. There are two hospitals: The Nchanga North General Hospital which is Governments owned and the Nchanga South Hospital is a privately owned hospital. In Chingola there is a high level of unemployment which has led to illegal mining activities in the district which is a problem. There are many Newspaper reports but very few research and medical reports have been written. There has been reports of illegal miners who have died as a result of copper mining. We present a male resident of Chingola. The patient was injured after a rock fall during an illegal mining expedition. The patient had craniotomy which was done via Burr holes and the hematoma was drained. He was saved but has ended up with a right hemiplegia. What is really worrisome is the number of victims who get injured and are maimed for life with no legal / government requirements to look after them following 'mining' accidents.

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## INTRODUCTION

Chingola is a mining town and the mining activities have been going on for a long time. It was founded somewhat later than the cities in the south-eastern half of the Copperbelt, in 1943, when the Nchanga Mine was started up. It was once known to be the cleanest town in Zambia.

### The features of Chingola

It is a town in Zambia in the province of the Copperbelt. It is designated as a District and geographically, it has an elevation of 4472 Ft(1363m). The total population of the town is approximately 200,000 people.

### The communication of Chingola

There are mainly two channels of connectivity to other towns; a Railway system and a Roads system. The Railway freight channel is critical and essential for the copper transportation.

It is operated by the Zambian Railways and services Chingola town from Kitwe. It is the key movement of copper ore to the smelters at Nkana in Kitwe. In 2013, a direct link to the Benguela Railway in Angola was proposed but it remained undeveloped .The second very useful communication from Chingola is the highway Road system. From Chingola, the main road to Lubumbashi in DR Congo passes via Chililabombwe running south-east from Kitwe going north-west to Solwezi. The road to Konkola where there is another mining area called Konkola branches off the main road to Lubumbashi. Chingola is also served by an Airport based at Kasompe. In terms of development, Chingola is rated as the 5th most developed cities in Zambia. The most developed residential areas within the town are Nchanga South and River Side. The town is known to be one of the best internet service provided cities in Zambia. It has a number of internet cafes & stores.

### The Chingola health Facilities

There are two hospitals: The Nchanga North General Hospital which is Government owned. It has a bed capacity of 283. The Nchanga South Hospital is a privately owned hospital by the KCM (Konkola Copper Mines Plc). It has the bed capacity of about 100.

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## The copper operations of Chingola

The Konkola Copper Mines PLC is the main mining company in Chingola. Currently it produces 2 million tons of copper ore per year. The company's deep mining project is planned to expand the copper production capacity to 6 million tons per year.

## The Facilities include

### Konkola Copper Mine

Nchanga Copper Mines near Chingola. This also producing cobalt.

### Nchanga ore concentrator Plant

Nampundwe Pyrites Mine (pyrites are used in the copper smelting process). The Chingola mine, the Nkana Smelter and the Nkana Refinery in Kitwe make the total Nchanga, currently, as the largest copper smelter in Zambia. The copper is exported by transporting it to the ports of Dar es Salaam in Tanzania and Durban in South Africa. The Principal markets include the Middle East and East Asia. Copper is also fabricated and sold domestically. It is done by a Zambian company called Metal Fabricators of Zambia (ZAMEFA) based in Luanshya. There is however, illegal mining in Chingola, which is a problem. It is a very common problem. There are many Newspaper reports but very few research and medical reports have been written. The perpetrators of illigal mining are called "JERA BOS". Many negative issues are known about them. There has been reports of illegal miners who have died as a result of copper mining. They have no rescue system and so when they have accidents, the illegal miners are rescued by their colleagues. It is not uncommon to be trapped in an illegal mining tunnel which it is known to collapse on them. The Government is saddened by the involvement of young persons in illegal and dangerous activities. In fact not too long ago, there have been reports of two Illegal copper miners who died while another sustained serious injuries after a pit caved in as they were digging for copper near Nchanga open pit mine in Chingola (Nkombo Kachemba and NkwetoMfula, 2014; Times Reporter :: Liat deplores child labour in illegal mining activities, 2010). In 2013, there were reports of 21 young illegal miners who died in 12 months in the process of carrying out the lucrative but risky mining business in the deep open pit mines in Chingola. It is also known that Konkola Copper Mines is losing in excess of US\$1.2 million annually in illegal mining activities at its vast open pit (Pan African Building Society, 2013). The biggest problem is that Chingola has a high level of unemployment which has led to illegal mining activities in the district. It is hoped the government will create more jobs for the youths in the area (Zuman Katasefa, 2011; Ronald Mwila, 2007). What is really worrisome is the number of victims who get injured and are maimed for life with no legal requirements/government requirements to look after them following 'mining' accidents. We present a case of an illegal mining accident.

## Case Presentation

We present MC, a male 21years old who is a resident of Chingola. The patient was quickly brought in the early hours of the morning to the hospital by unknown people and abandoned. They 'dumped' him. The patient was injured after a

rock fall during an illegal mining expedition. On Examination the patient was covered in dust with multiple lacerations on the scalp and had evidence of depressed skull fractures, one on parietal region, the other on frontal region. The History was as follows: He was an illegal miner. He takes alcohol and smokes. His temperature was 35.9, the Blood Pressure was 110/60. His pulse was rate was 64/minute. His Random Blood Sugar was 6mmol/dl. His Hemoglobin was 10g/dl. On his head, he was found to have a depressions around the frontal region of the head and the occipital area. The Chest, Cardiovascular system and Abdomen were normal. His Glasgow Coma Score was 11/15. There was weakness in the left upper and lower limb observed when patient tried to move. There were no clinical features of cranial nerve involvement. CT scan of the brain and cervical spine revealed multiple subdural hematomas, with no abnormalities in cervical spine. See the image below.

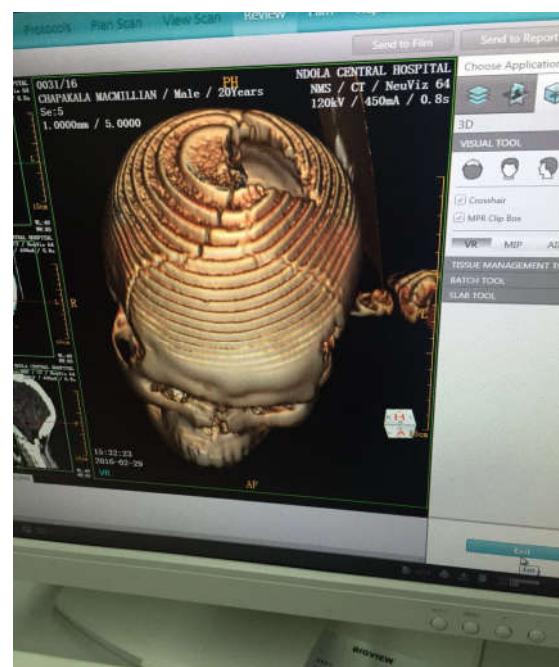
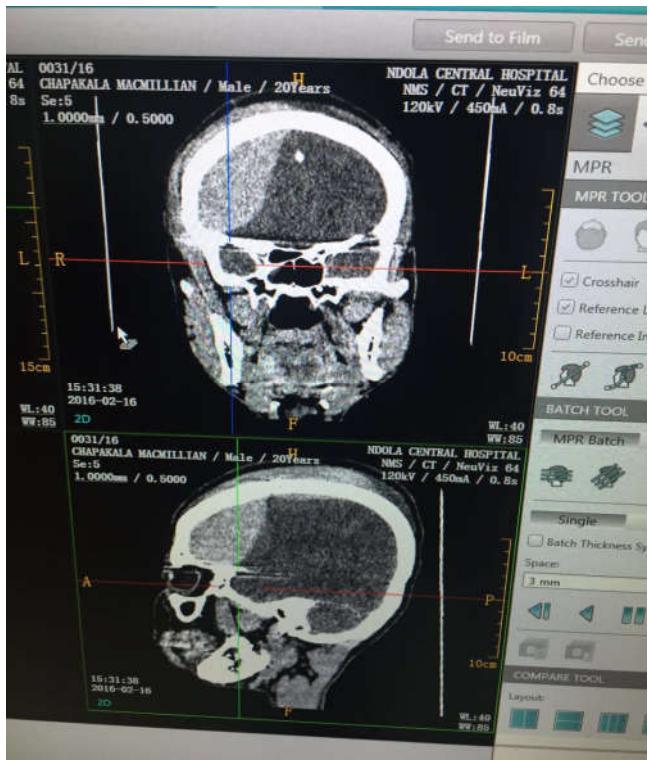


Figure 1. Brain Fall injury



Figure 2. Brain Fall injury



**Figure 3. Brain Heamatoma**

The patient was then scheduled for craniotomy which was done via Burr holes and blood was drained. There was a comminuted depressed skull fracture which was also elevated. The patient did very well the first few days post operatively. He was kept in the Intensive Care unit and finally sent to the ward after 5 days.

However, as the patient continued to recover, a repeat CT scan was ordered. Results are shown below.



**Figure 4. After Burr Holes**

The patient further developed right hemiplegia



**Figure 5. Right hemiplegia**



**Figure 6. Right hemiplegia**

Throughout his hospital stay, the patient did not receive any visit from any family members nor from a friend. His condition slowly began to deteriorate as he developed bed sores and was not feeding well. He further developed contractures in all limbs.

## DISCUSSION AND CONCLUSION

The big issue on the Copper belt is that there are the low employment levels of workers in the numbers of people working for the mines. Many former workers for the mines were laid off as some mining companies economically became poor and closed down to a large extent. Apart from this is that many youngsters have grown up and done their education up to grade 12 and some have been to colleges. Apart from that education they have no employment, they are just roaming the streets without jobs. This is particularly true in Chingola. This problem of high level of unemployment has led

to illegal mining activities in the district. It also must be said that it is a fact that the Legal regulation about Copper mining or indeed any mining in Zambia does exist and the mining law is said to be effective. The illegal miners seem to bypass the law or seem to take a weak mining regulation and guiding rules on trade of mining products. Illegal miners have taken an advantage and are making a living mode in that there is no control in what they do. We need to have strong legal regulations to prevent illegal mining. What actually is happening is that the illegal managers tolerate all sorts of peasant untrained miners who may be young boys or old men, they also do not set up safeguard mining safety practices. The standard emergency measures done in the legal mining companies, do not exist in the illegal miners. The end result are the deaths or maiming of the victims for life (Nkombo Kachemba and NkwetoMfula, 2014; Chatula Kampo, 2013). The illegal miners are also making significant money going to themselves, in fact they make as much as US\$1.2 million annually. The result is that Mine companies are losing excess amounts of money (Pan African Building Society, 2013; Zumani Katasefa, 2011; Ronald Mwila, 2007). We conclude that the above issues are major problems. However it is hoped the government will create more jobs for the youths in the

mining area of the copper belt and hopefully reduce the illegal mining (Zmani Katasefa, 2011; Ronald Mwila, 2007). What is really worrisome is the number of victims who get injured and are maimed for life with no legal requirements/ government requirements to look after them following 'mining' accidents.

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