

TELEMEDICINE IN THE CAVE.....

between fiction and reality



Premise

Few years ago SOMEONE start thinking of using the phone line, inside and outside the cave, not just in traditional way, but like an opportunity to trasmit data in digital format



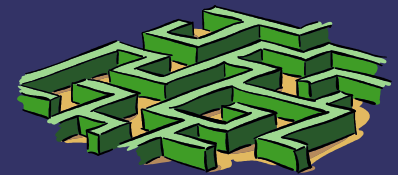
Italian Speleological Medical Commission

- ⇒ This project gained our interest
- ⇒ Starting to work together ...
- ⇒ Testing....Testing...Testing



My first personal experience....

...with transmission of medical data (2017)



Procedure in sequence

- ➔ Positioning of multiparametric monitor (HR, SpO₂, RR, TC, ECG) on the injured
- ➔ The data collected from the injured were transferred on a palmtop using the bluetooth mode (could be covered a distance between 20 and 30 meters depending on the cave structure)
- ➔ Data transmission from the palmtop to the base at the cave entrance using the phone line inside the cave
- ➔ Data transmission from the cave entrance to the others...(hospitals, specialists, or other members of Medical Commission), using a 3G internet connection



Other test during the training...

- ➔ The transmission of some video file with the ABCDE assessment of the injured by using a GoPro
- ➔ We tried some video calls from the injured to the cave entrance
- ➔ I used a little recording device, as small as a lighter, during the training



What we used during the training

- ⇒ Multiparametric monitor
- ⇒ A palmtop (or a small computer) inside the cave
- ⇒ Phone line inside the cave
- ⇒ A small recording device
- ⇒ A laptop and a phone with internet coverage outside the cave



CONCLUSIONS

- The transmission of medical data using different format...works very well !
To avoid engaging the phone line for more than 5/10 minutes better to use more files of small dimensions
- Videos require more time to be sent out, but they can be fragmented to help the process
- During the video calls connecting from inside of the cave to the entrance we have had some difficulties. The procedure has to be improved....
- The recording device was very useful: it gives you the chance to write down your observations about the clinical condition of the injured.



How I felt after this experience ?....

with the chief of Medical Commission at my back !



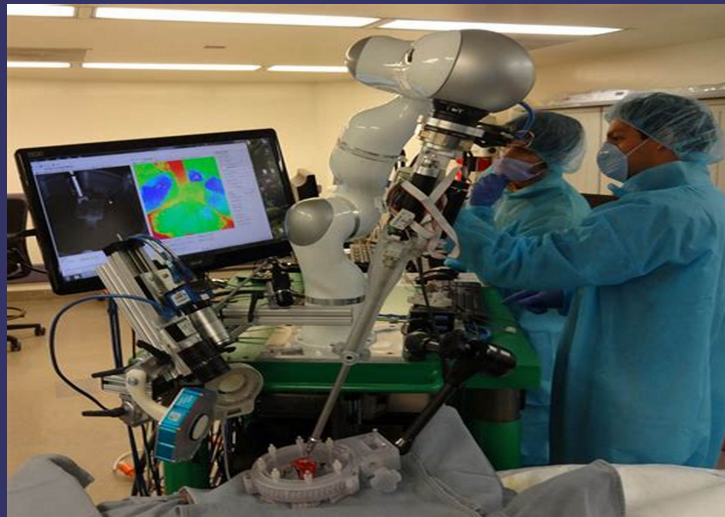
After one year

SURPRISE !



II TOMORROW.....

I hope that the evolution of data transmission in the cave will be not faster than our capacity to imagine the future of medical rescue inside the cave...



*We must have the courage to
dream..... THE IMPOSSIBLE*

