

## **My Stay in Mekelle / Ethiopia from 17.03. - 24. 03. 2017**

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The trip was carried out to evaluate whether and to what extent an angiological department could be established at the Ayder Hospital Mekelle or should be used for the treatment of angiological diseases, arterial, venous and lymphatic vessels.

From March 20 to 24, 2017, I took part in the clinical routine of the clinic and carried out vascular ultrasound examinations. I had the opportunity to get to know the structures on site with the support of Dr. Christian Leuner, Bielefeld, who was still there and I would like to thank him very much again.

### **Issues:**

1. To what extent are patients with angiologic diseases and therefore the need for a corresponding department?
2. Do the technical requirements exist or can they be produced?
3. Do you find the technical prerequisites and / or which measures would have to be taken?

### **Ad1. Disease:**

There are ample angiological symptoms, usually already in an advanced stage, so an angiological department would be useful and desirable.

### **Ad2. Desirable technical requirements:**

1. Color duplex unit with vessel sound heads (linear array 7.5 MHz and abdomen transducer Curved Array 3MHz)
2. Doppler device for deriving the vessels and measuring the Doppler pressures on the extremities (arms and legs)
3. A hand-held duplicator for measuring, e.g. On the patient bed, with 4 or 8 MHz probe
4. Method for measuring the blood circulation on the acres (toes and fingers), eg acral oscillation

### **Technical conditions on site:**

1. Each 1 color duplex unit of the FA SonoAce 8X with 1 linear array 7 -12 MHz transducer and Curved Array Abdominal Head 3 Mhz in radiology (here both probes have a cable defect but are conditionally functional) and in pediatrics
2. 1 Tissue Doppler in cardiology (currently missing the required 9V battery)

### **Ad3 professional requirements:**

A specialist for Internal Medicine (Oberarzt / Senior), who explains angiology to his own cause, and who initially acquires the necessary basic knowledge in angiology - especially vascular ultrasound - with the aim of establishing an angiological team, would be required / required

### **Technical requirements on site:**

In Cardiology, there is no colleague who has specific angiological knowledge, including vascular

ultrasound.

But:

Several colleagues at the Ayder Hospital are currently undergoing training with regard to catheter examinations and / or treatments of vessel occlusions or stenoses (narrowness), etc.

For example, One of these colleagues would also learn to recognize and diagnose the relevant disease patterns, especially as this would be an essential aid for successful catheter interventions.

**Conclusion:**

1. The establishment of an angiological department is absolutely necessary because of the patient's condition.

2. From the technical point of view the investigations could already begin with the existing equipment.

However,

2.1: Consultation of cardiologists with pediatrics and radiology for the use of their color duplex sonography instruments

2.2: Repair of defective ultrasound probes in radiology

2.3: Establishment of the Bags doppler in the cardiology (procurement of a 9 V - battery

3. The personal / professional requirements still have to be created.

Typically, one of the colleagues trained in catheter interventions could perform this function and build an angiological department