

Anatomical considerations for thalidomiders with tetra dysmelic condition

- sternotomy in tetra-dysmelic thalidomiders -

This information is aimed at health staff involved in the treatment of tetra – dysmelic thalidomide patients with regard to their special needs arising from their special anatomy.

Thalidomide was first marketed in 1957 in West Germany under the trade-name Contergan. The German drug company Chemie Grünenthal (now Grünenthal) developed and sold the drug which was given as a sedative and treatment for morning sickness. Thalidomide became an over-the-counter drug in Germany on October 1, 1957. Shortly after the drug was sold, in Germany alone, between 5,000 and 7,000 infants were born with malformation of the limbs. Approximately 50% of these children survived. Globally, 10.000 babies were affected, half of them to die at an early age. While thalidomide also affected inner organs, the dysplasia of extremities was the most striking feature, Tetra-dysmelia and terta-amelia present the most extensive damage in thalidomiders and involve severely deformed or missing arms and legs.

Persons affected by this condition learned as children to move along without the help of their extremities. Human will to locomotion is not hampered by missing arms and legs and persons with such extensive physical damage learned to move around by rolling or hobbling or by motion similar to that of a caterpillar.

This implies using both the thorax and abdomen for locomotion and needs to be considered in case of certain diagnostic or therapeutic approaches with regard to the rehabilitation the patient is likely to require in order to regain the pre-existing level of autonomy.

The present document deals with necessary considerations for patients with tetra-dysmelic conditions prior to open heart surgery as the therapeutic choice for cardiovascular conditions (eg ACVB)

Open heart surgery involving sternotomy will result in weeks of sever handicap and near immobility – thus helplessness - for any patient who relies on a stable thorax for locomotion

In a situation, where endoscopic (PCI) or bypass surgery (ACVB) are adequate alternatives to open heart surgery, with respect to the coronary situation, the least invasive procedure (endoscopy) should be given preference in order to spare the patient unnecessary suffering.

Indication for bypass surgery should lead to considerations if a thoracoscopic approach might lead to equally good results as open heart surgery but would spare the patient weeks and months of immobilisation after sternotomy.

Furthermore, due to the deformation of the legs, limited adequate vascular material for grafts has to be expected. A graft of the arteria mammaria may have to be considered as an alternative option.