The Effect of Prosthesis Socket Variations on Gait Deviation in Patients with Transfemoral Short Stumps: A Case Study

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ABSTRACT

**Background**: The most common problem in patient transfemoral short stump is lack of stability during walking and creates gait deviation. One of the things that can increase the stability is which socket that used. Socket is the most important part of prosthesis for increasing stability for the patient itself. Because of that really important to decide which socket that has gait deviation close to normal especially for patient transfemoral short stump.

**Objectives**: To know which socket that has gait deviation especially for lateral trunk bending and abducted gait those close to normal gait for patient transfemoral short stump with using quadrilateral socket and IC socket.

**Methods:** This research is using case study method. Sample of this research is patient transfemoral short stump, male, 54 years old. Patient asked for use quadrilateral socket and IC socket 2 days each. Observation of gait deviation is using recorder. Degree of lateral trunk bending and distance of abducted gait were measured by recording in 2nd meter until 6th meter. This research has done in Clinic ortothotics prosthetics Poltekkes Kemenkes Jakarta I.

**Results:** Result of the research shows that socket that have gait deviation less than ideal normal espsecially degree of lateral trunk bending and distance of abducted gait is IC socket compare to quadrilateral socket. Degree of lateral trunk bending while using ic socket got 10,07° but for quadrilateral socket got 12,57° with ideal normal is 11,32°. Distance of abducted gait for IC sockets is 25,8 cm but quadrilateral is 29 cm with distance ideal normal is 27,4 cm.

**Conclusion:** This research shows that there is any effect of difference sockets toward gait deviation especially lateral trunk bending and abducted gait for patient transfemoral short stump. From this research get results socket that better for patient transfemoral short stump is IC socket.

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