Stump atrophy: Improper Use of an Iceross Silicone Liner in a bilateral transtibial

Hossein Gholizadeh
Abstract

Amputee’s rehabilitation is a challenging procedure which requires expertise, especially in the selection of prosthetic components based on amputee’s need. Proper use of silicone liner has significant role in the process of rehabilitation of an amputee. We report a bilateral transtibial amputee (51 year-old-woman) due to peripheral vascular disease, using prosthesis with silicone liner. She had rolled proximal end of the liner over the thigh for more than 10 years which had resulted in severe atrophy in her thigh and stump muscles. We decided to cut the excess of the liner and after four months we checked the stump and thigh muscles again. After cutting the excess of the liner without any changes in prosthetic socket, the muscles recovered about 8% and the subject was more comfortable during walking. This study showed that leaving the excess of the liner by the prosthetist and rolling the liner can create double pressure around the thigh muscles. This excess pressure can restrict blood circulation in the stump and thigh and in long term can cause severe atrophy. Therefore, the prosthetists should take this into account when delivering the liner.
Figure 1. Before cutting the excess of the silicon liner (A,B) and 4 months after cutting (C)
References:


