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## The effect of physiotherapy program on hip pain and postural control in adolescents with sickle cell disease

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**Background:** Sickle cell disease (SCD) is one of the most known genetic diseases in Saudi Arabia. With a common complication found to be the avascular necrosis (AVN) of the femoral head by 27% in eastern province. This AVN causes distraction of the hip joint, pain, and other complications.

**Objectives:** the aim of this study was to measure the effect of physiotherapy program on pain intensity and postural stability in sickle cell disease adolescents with hip avascular necrosis.

**Methods:** 21 participants who are aged between 10 to 18 years old and known to have SCD with hip AVN were recruited. Measurements were taken at baseline and at the end of the treatment program. Wong-Baker FACES pain rating scale was use to evaluate the pain intensity. Biodex Balance System was used to evaluate the OSI. Manual goniometer was use to evaluate the ROM. Manual muscle testing was used to evaluate the MP. The statistical outcome differences within the group analysis was measured using paired t-test. Wilcoxon signed rank test was used to measure the differences within the group analysis for non-parametric variables.

**Results:** All participants showed improvement in pain intensity, OSI at level 6, ROM, and MP. However, OSI at level 12 post-test result was better than the pre-test result, but it did not give a significant statistical difference.

**Conclusion:** Physiotherapy program proved to be effective method to improve the pain intensity and postural stability in SCD patients with hip AVN. Furthermore, improvement of ROM and MP will improve or limit the related complications.

### Biography

Fatimah Alzahrer has completed her bscpt from King Saud University in 2007 and mscpt from Imam Abdulrahman Bin Faisal university in 2018 from Saudi Arabia. She is working as a senior PT in King Fahad Military Medical Complex in Dhahran since 2007 till now. Successfully treating patients and training fresh graduates in different fields of physiotherapy such as orthopedic, neuro, pediatric and other physiotherapy subspecialties.

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