Country of origin: Iran

Title Comparing the effects of reflexology methods and Ibuprofen administration on dysmenorrhea in female students on Isfahan University of Medical Sciences Journal Iran J Nurs Midwifery Res. Authors M. Valiani, E Babaei, R Heshmat, Z Zare Reference Dec 2010; (Suppl 1); 371-378

Disease / illness Healthy volunteers with primary dysmenorrhea Type of study Quasi experimental clinical trial Number of clients 68 female students Control type Standard treatment - Ibuprofen 400mg once every three hours for 3 days during three consecutive monthly periods

Method Healthy students with primary dysmenorrhea were recruited from a University teaching mainly medical sciences, 18-25 years old. They were allocated to two groups  Intervention –10 daily reflexology session for 40 minutes prior to menstruation for two months. No treatment third cycle.  Control – standard treatment, Ibuprofen 400mg once every three hours for 3 days during three consecutive monthly periods  There were no differences between the groups prior to intervention.

Outcome measures: completed before treatment and after each menstrual cycle.  McGill pain questionnaire (MPQ)  Visual analogue scale (VAS)  Pain rating index (PRI)

Results

A comparison of the VAS between the before and after sampling, of both groups showed a significant difference in all three cycles. There was a pain dampening effect in both the Ibuprofen and reflexology groups.

Remember that reflexology was not provided in cycle 3. Between the two groups, the VAS showed a significant and increasing statistical difference across the three cycles with reflexology, period one p=0.004, period two p<0.001, period three p<0.001.

Similar effects were shown across the three cycles with the pain rating index, period one p=0.024, period two p=0.001, period three p<0.001.

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The McGill Pain Questionnaire can be split into four parts, sensory, emotional, cognitive and other providing scores between 0 and 42.

MPQ – Sensory average scores Reflexology Before After one cycles

After 2 No tx 3rd cycle 17.1 8.46 6.71 5.18 Ibuprofen Before After one cycles After 2 After 3 17.38 12.36 12.22 11.58 P 0.047 0.006 0.001

MPQ – Emotional average scores Reflexology Before After one cycles

After 2 No tx 3rd cycle 6.31 2.21 1.59 1.09 Ibuprofen Before After one cycles After 2 After 3 6.91 4.19 3.80 3.13 P 0.006 0.001 0.001

MPQ – Cognitive average scores Reflexology Before After one cycles

After 2 No tx 3rd cycle 3.5 1.4 1.21 1.09 Ibuprofen Before After one cycles After 2 After 3 3.05 1.75 2.0 1.52 P 0.02 0.01 0.008

MPQ – Other pain dimension average scores Reflexology Before After one cycles

After 2 No tx 3rd cycle 6.84 3.15 1.84 1.68 Ibuprofen Before After one cycles After 2 After 3 6.83 4.41 4.66 4.05 P 0.008 0.001 0.001

Mean duration of pain in hours Reflexology Before After one cycles

After 2 No tx 3rd cycle 32.46 15.90 14.86 9.78 Ibuprofen Before After one cycles After 2 After 3

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36.19 26.19 23.91 23.41

Remember that reflexology was not provided in cycle 3.

Results Despite the fact that reflexology was not provided in the third cycle, across all outcome measures reflexology produced better responses in all three cycles as compared to Ibuprofen.

Conclusion ‘Reflexology was associated with more reduction of intensity and duration of menstrual pain in comparison with Ibuprofen therapy… Reflexology was superior to Ibuprofen on reducing dysmenorrhea and its treatment effect continued even after discontinuing the intervention in the third cycle.’