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| **Supplementary table: Interventions, outcomes, and results of the trials on patients with PD** |
| **Author** | **Tx Time****Tx Session****Period of Tx** | **Tx Zone****(electrodes placement)** | **Treatment parameters** |  | **Results** | **Follow-up** |
| **Intensity (**mA**)** | **Pulse duration** (μs) | **Fr** (Hz) | **Current****type** | **Clinical****outcomes** |
| Tugay 2007[30] | -20 min at the timeof dysmenorrhea- One menstrual cycle | Two electrodes on proximal margin of low back area & two others at proximal of gluteal region | Comfortable maximal level | 100 | 120 | Conventional TENS | -VAS | -↓Pain in both G. (P<0.05)-No superiority existed between the methods (P≥0.05)No AEs. were observed | No |
| 0-100 (10 min) &90-100 (10 min) | IFC |
| Schiotz 2007[29] | -During four menstrual cycles | SuprapubicallyORlower back | NR | A: 110 | 110 | Biphasic, asymmetrical, rectangular | -VAS-No. of Ana Tab. | -**↓**Pain in TENS G. (P= 0.0009)-**↓**Use of Ana Tab.in the TENS G. (P=0.03)No AEs. were observed | 6 – 8 months |
| B: 50 | 110 |
| C: 2 | 100 |
| Wang 2009[27] | -30 minutes at one time-Two repetitions are allowed-Two menstrual cycles | Lower back & along lower borders of the ribs and upper borders of the hip crests on both sides | 50 | 200 | 100–120 | NR | -VAS-Pre-post stimulation measurement-Autonomic symptomsquestionnaire-QOL-AEs | -**↓**Pain in both G. (P˂0.001)-Change the degree of autonomic symptoms in TENS G. (P= 0.048)-No difference in QOL in both G. (P=0.17)Increase in menstrual flow, increase in heart rate | No |
| Parsa 2013 [26] | -20 min at the first day of menstrual complaints | Two electrodes on proximal margin of low back & two electrodes onproximal of gluteal | Max tolerated level | 90-100 | 0-100 | NR | -VAS-No. of Ana Tab. | -**↓**Pain in both G. (p<0.01)-**↓**Use of Ana Tab. in the TENS G. (p<0.01)No AEs. were observed | No |
| Lauretti 2015[24] | -30-min duration at eight-hour intervals(3 times)-one menstrual cycle | Medially at the suprapubic region | 0102030 | NR | 85 | Mixed of conventional & burst | -VAS-No. of Ana Tab.-QOL-AEs | -**↓**Pain in Tx G. (P˂0.001)**-↓**Use of Ana Tab in Tx G. (P˂0.001)-**↑**QOL in Tx G. (P˂0.05)No AEs. were observed | Three months |
| Lee 2015[23] | -30 min (10 min TENS & 20 min thermotherapy)-Every day until the end of the menstruation-One menstrual cycle | Lower abdomen | NR | NR | 100–110 | NR | -VAS-Duration of pain relief-No. of Ana Tab.-BPI score-QOL-AEs | -**↓**Pain in TENS G. (P˂0.001)-**↑**Duration of pain reliefin TENS G. (P˂0.001)-No differences in the BPI scores, use of Ana Tab., and QOL between the groups (P˃0.05)No AEs. were observed | No |
| Bai 2017[25] | -30 min-≤8 days during each menstrual cycle-Three menstrual cycles | Painful area | NR | NR | 2 - 100 | NR | -NRS-Duration of pain relief-No. of Ana Tab.-QOL-AEs | -**↓**Pain in TENS G. (P˂0.01)**-↑**Duration of pain relief in TENS G. (P˂0.01)-**↓**Use of Ana Tab. in TENS G. (P˂0.01)-No difference in QOL at two groups (P˃0.05)No AEs. were observed | No |
| Olsén 2019[28] | -60 second-Several times a day-One menstrual cycle | On each side of the uterus | 40 | NR | 80 | NR | -VAS-No. of Ana Tab.-Physical function | -No significant effect of TENS in any of the variables (P˃0.05) | One wash-out period |
| AEs: Adverse effects, BPI: Brief pain inventory, Fr: Frequency, G: Group, IFC: Interfrential current, No of Ana Tab: Number of Analgesic tablet, NR: Not report, NRS :Numeric rating scale, PD: Primary dysmenorrhea, QOL: Quality of life, TENS: Transcutaneous electrical nerve stimulation, Tx: Treatment, VAS: Visual analog scale |