# Sharula et al. (2012) Tables 1 and 2 Clinical Features + Laboratory Data

**Study:** Sharula, Chekir, C., Emi, Y., Arai, F., Kikuchi, Y., Sasaki, A., Matsuda, M., Shimizu, K., Tabuchi, K., Kamada, Y., Hiramatsu, Y., & Nakatsuka, M. (2012). Altered arterial stiffness in male-to-female transsexuals undergoing hormonal treatment. *Journal of Obstetrics and Gynaecology Research*, *38*(6), 932–940. [DOI:10.1111/j.1447-0756.2011.01815.x]
**Clinic:** Outpatient clinic of the Okayama University Hospital in Okayama, Japan.
**Population:** Transfeminine people (n=156). Never treated with hormone therapy (n=27) versus treated with hormone therapy (n=129).
**Treatment:** Oral or parenteral estrogen alone or with a progestin. Oral = CEEs 1.875–5.0 mg/day. Parenteral = EV, EC, or EDP by intramuscular injection 10–20 mg/2 weeks or E2 transdermal patches 0.72 mg × 2 every 2 days (**injections or patches in the estrogen alone group but only injections in the estrogen + progestin group**). Progestin = MPA oral 2.5–5 mg/day (oral estrogen group) or OHPC 125 mg/2 weeks (parenteral estrogen group). Antiandrogens were not used as use of antiandrogens in transfeminine people in Japan is not common.

| Coagulation measure | Untreated (n=27) | Treated (n=129) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Estrogen alone (n=56) | | | Estrogen + progestin (n=73) | | | Combined (n=129) |
| | | Oral (n=34) | Parenteral (n=22) | Combined (n=56) | Oral (n=36) | Parenteral (n=37) | Combined (n=73) | |
| Age (years) | 31.5 ± 9.9 | 30.0 ± 9.6†‡ | 37.9 ± 10.0*† | 33.0 ± 11.2 | 34.0 ± 9.8 | 35.4 ± 8.2‡ | 34.7 ± 9.0 | 33.9 ± 10.0 |
| BMI (kg/m$^2$) | 21.0 ± 3.1 | 21.9 ± 3.2 | 22.0 ± 2.9 | 21.9 ± 3.1 | 21.5 ± 2.6 | 22.0 ± 3.0 | 21.7 ± 2.8 | 21.8 ± 2.9 |
| WHR | 0.84 ± 0.07 | 0.85 ± 0.09 | 0.83 ± 0.08 | 0.84 ± 0.08 | 0.86 ± 0.05 | 0.86 ± 0.07 | 0.86 ± 0.06 | 0.85 ± 0.07 |
| Hormone treatment duration (months) | 0 | 38.4 ± 28.7 | 45.5 ± 41.6 | 41.1 ± 34.1 | 34.9 ± 26.3 | 43.1 ± 47.6 | 38.9 ± 38.3 | 39.9 ± 36.4 |
| GRS | 0 (0%) | 5 (14.7%) | 7 (31.8%) | 12 (21.4%) | 6 (16.7%) | 5 (13.5%) | 11 (15.1%) | 23 (17.8%) |
| Estradiol (pg/mL) | 24.9 ± 7.7 | 97.6 ± 115.7‡ | 197.6 ± 443.3 | 139.7 ± 299.6 | 186.7 ± 429.9 | 385.4 ± 553.0*‡ | 275.0 ± 491.4* | 205.5 ± 407.3* |
| Testosterone (ng/dL) | 591.2 ± 236.5 | 89.7 ± 95.0** | 100.8 ± 127.6** | 94.9 ± 110.1** | 64.4 ± 100.5** | 51.6 ± 46.2** | 57.9 ± 77.2** | 73.2 ± 93.4** |
| APTT (s) | 33.0 ± 3.6 | 31.3 ± 3.6 | 30.3 ± 2.4* | 30.9 ± 3.1* | 31.7 ± 3.2 | 30.8 ± 3.4* | 31.3 ± 3.3* | 31.1 ± 3.2* |
| PT-INR | 0.98 ± 0.11 | 0.96 ± 0.08 | 0.95 ± 0.05 | 0.96 ± 0.07 | 0.97 ± 0.067 | 0.96 ± 0.08 | 0.96 ± 0.07 | 0.96 ± 0.07 |
| Fibrinogen (mg/dL) | 280.0 ± 56.1 | 335.4 ± 103.0 | 389.0 ± 60.8 | 350.7 ± 91.5 | 293.0 ± 18.4 | 303.3 ± 65.5 | 299.8 ± 51.7 | 327.2 ± 77.4 |
| D-Dimer (μg/mL) | 0.51 ± 0.03 | 0.43 ± 0.12 | 0.56 ± 0.09 | 0.51 ± 0.07 | 0.78 ± 0.49 | 1.02 ± 1.22 | 0.77 ± 0.75 | 0.63 ± 0.51 |

Data are mean ± SD. * $P < 0.05$ versus untreated. ** $P < 0.01$ versus untreated. † $P < 0.01$. ‡ $P < 0.05$. APTT = activated partial thromboplastin time (intrinsic pathway). PT-INR = prothrombin time-international normalized ratio (extrinsic pathway). BMI = body mass index. WHR = waist–hip ratio. GRS = gender reassignment surgery.

Study also has hematocrit, uric acid, glucose, total cholesterol, HDL cholesterol, LDL cholesterol, triglycerides, blood pressure, and arterial stiffness.

Notable excerpt from the paper: “Estrogen is given to MTF transsexuals orally as conjugated estrogens, or 17β-estradiol, as transdermal estrogen, or as parenteral estrogen esters to feminize the body.[5] There is no evidence that progestin has beneficial effects on treatment with estrogen in MTF transsexuals; however, progestins were administered to some of MTF transsexuals. Because **administration of antiandrogen to MTF transsexuals is not common in Japan**, we could exclude the modification with antiandrogen in the present study.”

A similar study of androgen therapy in transmasculine people was also published by the same group of researchers: Emi et al. (2008).

Review of transgender hormone therapy and cardiovascular risk factors by one of the authors: Nakatsuka (2010).