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**Primary PCI for STEMI: Gender, Bleeding and Transradial. An Intriguing Combination**

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Background: Female gender female has been associated with increased bleeding after primary PCI (PPCI) for STEMI. The influence of the transradial (TR) approach on the bleeding rate in female STEMI patients has not been investigated. Aim: To evaluate gender specific bleeding complications according to access site during PPCI.
Methods: Retrospective and comparative study of 259 women and 1009 male who underwent PPCI for STEMI (2005-2009). End Point: Overall bleeding, access and non access bleeding, large and small hematomas.
Results: Women were older (69±13 vs. 57±13 ,p<0.01) with more frequent arterial hypertension (77% vs.55%,p<0.01) and diabetes (38% vs.24%,p<0.01). They had higher BMI (29±6 vs. 27±4, p<0.01) and creatinine level (1.03±1 vs.0.98±0.6 mg/dl, p<0.02). Transradial PCI was used less frequently in women ( 41% vs. 59%, p<0.01). The women had more Overall bleeding (23% vs. 13%, p<0.01), access site bleeding ( 21% vs. 11%, p <0.01), large hematoma rate (3.5% vs. 1.4% (p=0.02) and small hematoma rate (18.5% vs. 9.6%). TR PPCI was associated with a reduction of overall bleeding (5% vs. 26%, p<0.01), access site bleeding ( 4.5 vs. 23%, p<0.01), small hematoma (4% vs 19%, p<0.01) and large hematoma (0.4 vs. 3%,p<0.01) in the overall population. Rates of bleeding according to access site and gender are presented in the table.
Conclusion: Bleeding complications after PPCI are more frequent in women. Transradial PPCI is associated with a markedly reduced risk of bleeding, however still they are more frequently observed in women due to a high occurrence of small hematoma at the access site.

| | | Women | Men | p value |
|---|---|---|---|---|
| Overall bleeding (%) | TR | 15 | 4 | <0.01 |
| | TF | 28 | 26 | ns |
| Access Bleeding(%) | TR | 14 | 3 | <0.01 |
| | TF | 23 | 21 | ns |
| Large Hematoma(%) | TR | 0.1 | 0.5 | ns |
| | TF | 5 | 2.5 | ns |
| Small Hematoma(%) | TR | 13 | 2 | ns |
| | TF | 18 | 19 | <0.01 |