# The Most Recommended Site for Subcutaneous Remodulin® (Treprostinil) Pump to Minimize Patient Pain

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## **Background:**

The first Remodulin® I-jet pump implantation in Egypt was performed in 2017 at the Magdy Yacoub Aswan Heart Centre. Face flushing, headaches, jaw pain, cramping, diarrhea, and pain at the insertion site are major side effects of the drug. According to clinical studies, site pain reaches up to 93% of patients with Remodulin® pump. Some patients at Aswan Heart Center want to discontinue the treatment because of the intense pain.

## Aim and objectives:

The study aims to identify the most appropriate subcutaneous Remodulin® site to minimize pain.

#### **Methods:**

The literature review suggested that the less sensitive place for Remodulin® insertion is found to be the upper arm, followed by the abdominal area, the hip area, the upper buttocks, and the thigh.

A semi-structured interview was conducted through a phone call. The patients were questioned to identify the most appropriate and least painful place for pump insertion based on their experience, the upper arm site was recommended for the patients who never use this site.

#### **Result:**

23 patients were included in the study. 13 patients reported that the upper arm place for the Remodulin® insertion is comfortable for them. 3 patients reported that the thigh and abdominal site of insertion was comfortable for them whereas 7 patients reported the opposite and still complained of severe pain.

Based on the literature review and the majority of patients' opinion the upper arm was recommended to the patients. A follow up conducted one month after the recommendation for those 7 patients. The result demonstrated that 4 out of 7 became comfortable with using the upper arm and 2 out of 7 still complain of severe pain in the abdominal site and plan to change the pump site to the upper arm through the upcoming days and only 1 patient complained from severe pain in upper arm site.

### **Conclusion:**

Based on the literature review and evidence-based practice the recommended initial site for Remodulin® insertion is changed to significantly minimize the pain by using the upper arm.

## **Keywords**