

# PREVALENCE OF HIGH ON-TREATMENT PLATELET REACTIVITY TO ASPIRIN IN PATIENTS WITH PERIPHERAL ARTERY DISEASE (PAD) TREATED WITH PERCUTANEOUS TRANSLUMINAL ANGIOPLASTY (PTA) OF THE ARTERIES OF LOWER LIMBS AND ITS CONSEQUENCES

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## BACKGROUND

### HIGH ON-TREATMENT PLATELET REACTIVITY TO ASPIRIN IS ASSOCIATED WITH

- increased risk of ischemic events
- other vascular complications

in patients following:

- coronary interventions
- peripheral percutaneous transluminal angioplasty
- other vascular procedures

### Patients with PAD following PTA are prone to complications:

- stent thrombosis
- arterial thrombosis
- vascular bypass thrombosis

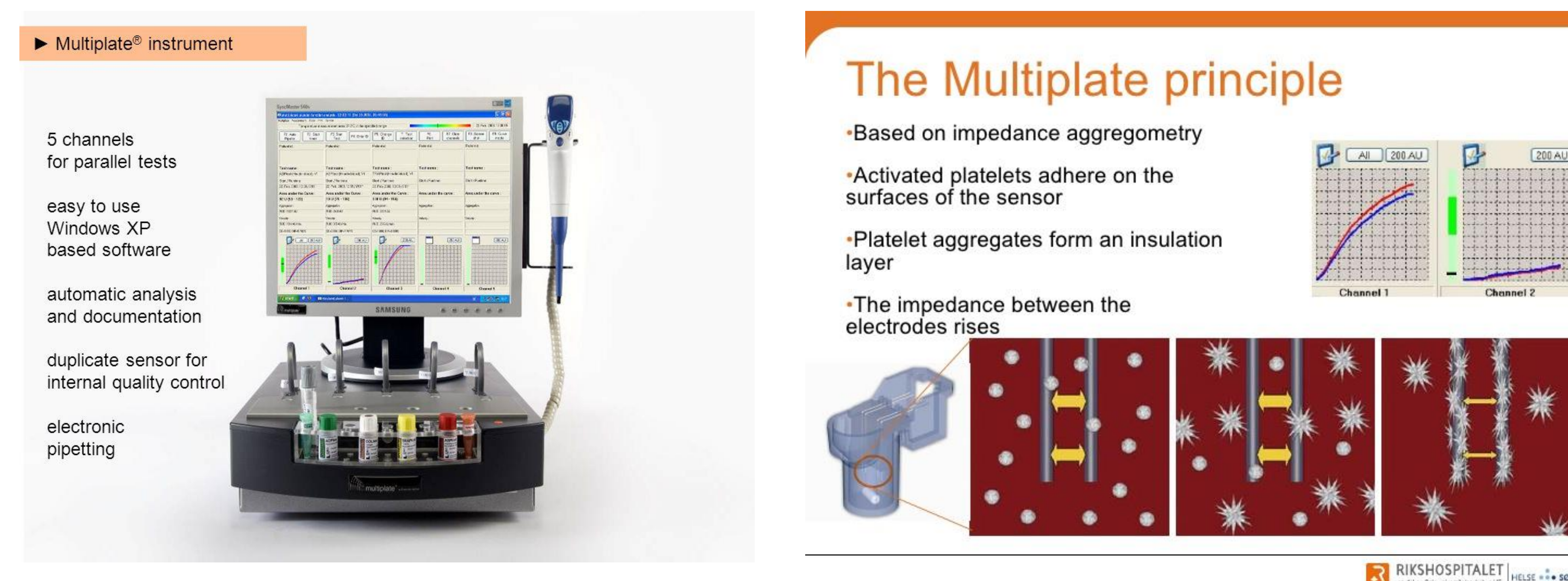
### DESPITE TREATMENT WITH ASPIRIN!

## AIM OF THE STUDY

to assess platelet responsiveness to aspirin in patients with PAD following PTA of the arteries of lower limbs

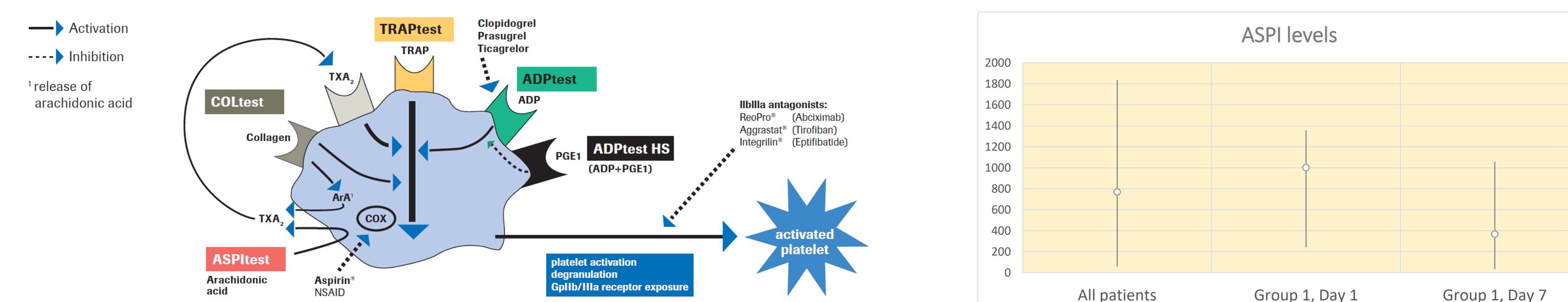
## METHODS

- **140 patients with PAD undergoing PTA** of lower limbs were included
  - **29 patients** (group 1) were **not treated with aspirin** therapy prior to the admission
    - all of them started aspirin treatment on admission
  - **111 patients** (group 2) were **treated with aspirin** therapy prior to the admission and the treatment was continued during the study
- Two blood samples were collected from each of the patient**
- one sample at the day of admission to the hospital
  - second sample one week (7 days) after the first blood collection



We assessed platelet activation pathways involving the arachidonic acid receptor (ASPI). ASPI-tests using multiple electrode aggregometry were performed in all blood samples.

'Low responders' were patients with an ASPI-test value greater than or equal to 700



## RESULTS

- ASPI levels in blood samples obtained on the day of admission were between 61 and 1837 (mean 771).
- Among the patients, who started aspirin treatment on the day of admission (group 1) - on the day of admission: ASPI levels were from 244 to 1357 (mean 1002)
- After a week on aspirin treatment, ASPI levels among them were from 33 to 1057 (mean 368).

THERE WERE 3 'LOW RESPONDERS' OUT OF 29 PATIENTS IN GROUP 1

ASPI on the day of admission	1267	1306	1188
ASPI after 7 days of ASA treatment	828	856	1057

there were one of the highest ASPI levels obtained in the whole study

### No statistically significant changes in ASPI levels

in all patients treated with aspirin therapy prior to the admission [group 2; (no. 111)]

## CONCLUSIONS

- High on-treatment platelet reactivity and low platelet response to aspirin in patients with peripheral artery disease following peripheral percutaneous transluminal angioplasty (PTA) of the lower limbs arteries may be the result of their platelet high reactivity in general.
- Greater doses of aspirin or other antiplatelet drugs may be required for these patients to avoid postoperative complications.