

# The problem with non-adherence arising from medical practices

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## Introduction

How to increase the proportion of patients adhering to their medication has been widely studied lately as well as the reasons for non-adherence.<sup>1–4</sup> Non-adherence can be divided into intentional and unintentional behaviour. Unintentional non-adherence has received less attention than intentional non-adherence, and studies on unintentional non-adherence mostly focus merely on patients and on how to help them to remember and to be able to take their medications.<sup>5,6</sup> That was also the starting point for our study trying to find out why patients do not take their antithrombotic medicines after a percutaneous coronary intervention (PCI) procedure. From the national registry it was possible to determine which patients had not bought their medications from the pharmacies and it turned out that almost half of the patients had never bought a single package of a P2Y receptor inhibitor (clopidogrel, prasugrel or ticagrelor). However, the reason behind this non-adherence was something we had not expected.

## Expectations

A coronary patient having undergone a PCI could be thought to be adherent to the medication, which is planned to keep the arteries open and to prevent further coronary attacks. It was a surprise to find that many patients seemed not to take their medications as expected. To find out the reasons behind this non-adherence we decided to ask these patients for a specific reason for their behaviour; whether they had too many pills, had suffered from adverse drug events, or had any other reasons, including financial problems, for not buying the medicine even though medicines are subsidised by the social security system in Finland and most of these patients get their medications for a very low price.

## Methods and results

Because of ethical considerations, the patients were first asked by mail for permission to contact them and to enquire about details concerning their medications. There were 152 patients who had undergone a PCI

during the first 6 months of the year 2012. Fifteen of them had died and two patients had no present address. An enquiry was sent to 135 patients and reasons for not having bought their antithrombotic medicines were asked. Seventy-six patients (56%) answered and 30 of them were patients who, according to our statistics from the social security institution, had not bought their medications. These patients were contacted by phone and the reasons for their non-adherence were asked. They all answered that this antithrombotic medication had never been prescribed for them.

## Next step

In order to determine the reasons for non-adherence most studies have concentrated on patients.<sup>7–10</sup> There have been fewer studies on unintentional non-adherence caused by doctors. Lopez-Carmona et al. performed an epidemiological study in Spain where they found a significant gap between current guidelines on recommended prescriptions and clinical practice to make these prescriptions.<sup>11</sup> However, the reasons behind this practice were not studied and it remains unknown whether this behaviour was intentional on the part of the doctors. Our study showed that the reasons for non-adherence may be more complicated and connected to the system and medical practices, not only to patients and doctors, as all the doctors were undoubtedly fully aware of the clinical guideline to prescribe antithrombotic medicine for at least 3 months after a PCI. It seemed that there were many explanations for the fact that these medications were not

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prescribed. One of them was that the PCI was performed on a Friday, the patient went home during the weekend and the paperwork was finalised first on Monday. Consequently, there were three physicians that had been involved in the treatment of the patient and all of them thought someone else would have taken care of the medications. Another example is that the patient was asked to stop the antithrombotic for the invasive treatment and had not understood that they were supposed to restart after the procedure. It may be that the presence of a pharmacist in the department, or a less hierarchical system in the hospital, would help to solve these kinds of problems.<sup>12</sup> However, it should be kept in mind that the reasons behind non-adherence can be even more numerous than we have thought and a thorough root-cause analysis is needed before any final conclusions are drawn.

### Author contribution

OLR conceived and drafted the manuscript; JS and RR critically reviewed and amended the manuscript. All authors gave final approval and agreed to be accountable for all aspects of the work ensuring integrity and accuracy.

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