D-Dimers, a strong negative predictive value and a strong positive treatment factor in acute situations with suspected pulmonary embolism?

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Plasma D-Dimer measurement is commonly used as the first test in patients suspected of having acute pulmonary embolism (PE). Specificity is typically between 40% and 60%, leading to a high rate of false positive results. Several factors are associated with positive D-Dimer results.
We reported 2 clinical cases as landmark and complex situations seen in primary care where D-Dimer measurements have been contributive for treatment decision in suspiscion of PE.
Mrs J.P. 88 yo, having a pleural mesothelioma with chemotherapy abstention was treated by antibiotics for a common pulmonary bronchitis. One week after the recovery, she complained of a thoracic pain and a mild dyspnea without fever and an oxygen saturation of 92%. Blood analysis showed a normal white cells count, a CRP=118 mg/L and D-Dimers=3143 ng/mL. She refused to be hospitalised. Left pleural syndrome was persistent contra-indicating contributive thoracic imaging. Ambulatory treatment by subcutaneous Tinzaparin 10.000 UI daily for 1 month was undertaken. D-Dimers kinetic showed an important decrease during one month (2246 mg/mL at day 15 and 890 mg/mL at 1 month) and symptoms disappeared.
Mrs J.R. 87 yo had an isolated persistent nocturnal cough after 5 days of symptomatic treatment. She became dyspneic without fever and an oxygen saturation of 90%. Blood count was normal, CRP=1 mg/mL and D-Dimers=3069 ng/mL. She refused to have thoracic imaging because she had to care her husband at home. She accepted to be treated at home with Tinzaparin 10.000 UI daily for one month. D-Dimers kinetic showed a significant decrease over one month D-Dimers=437 ng/mL at day 21 associated with clinical improvement.
In conclusion, D-Dimers has a known strong negative predictive value, Increased values could be in some ambulatory situation of suspected PE and treatment decision marker and D- Dimers kinetic associated with clinical improvements could confirm afterwards the decision taken.

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Note to Editor	:	Positive predictive value of D-Dimers remains a difficult discussion. In primary care facing some complex situation, could we make the treatment decision based only on suspected symptoms and high values of D-Dimers
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