ancillary diagnostic tools. Blood was present at the meatus in three patients; urethrography demonstrated a urethral wall tear in five men (16%). Four patients with minimal symptoms had an ultrasound which showed a small tear in the tunica albuginea.

Overall 14/32 patients (44%) were treated conservatively, with outpatient follow-up. Indications for outpatient management included long duration of symptoms, minimal pain/swelling, ability to urinate, and small tears seen on ultrasound. Outpatient treatment included compression bandages and consistent cooling, combined with anti-inflammatory, antibiotic and analgesic therapy. Five patients treated conservatively subsequently returned to the hospital for surgical repair. A total of 18/32 (56%) underwent immediate surgical repair of the penile trauma and no short-term complications were noted. Defects in the tunica albuginea were repaired with sutures and the hematoma was evacuated.

While it is a rare occurrence, the diagnosis of penile fracture can generally be made clinically and does not require further investigation when the patient presents with typical onset and characteristic physical findings, including swelling and ecchymosis of the penis with a deviation toward the side opposite the injury. However, not all patients have a typical history. Ultrasound and retrograde urethrograms, especially in an atypical case, should be performed to rule out other injury and to help determine appropriate surgical treatment. The management of penile rupture includes both conservative treatment and early surgical repair, when indicated, to avoid complications such as persistent clot, angulation, penile abscess and fibrosis. We did not encounter any major complications in either the conservative or surgical treatment groups in our study, however five patients treated conservatively did require subsequent surgery to repair damaged tissue.

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Early diagnosis of atrial fibrillation using a E-health application

Cardiac events occur relatively commonly in patients with acute community-acquired pneumonia [1]. In the elderly, the pneumonia might cause a heart failure and might be a trigger for atrial fibrillation (AF) [2]. When patients without vital distress are treated in hospital, they are admitted to a medical unit without continuous monitoring. In our Emergency Department (ED), patients requiring oxygen for pneumonia without vital distress are hospitalized in our medical unit. In this unit, clinical monitoring of patients by the nurse is performed manually with a maximum frequency of three or four times per day. In addition to this monitoring, these patients are real-time monitored, using Sensium® technology (Fig. 1A and B). This wearable and wireless Patch measures heart rate (HR), respiration rate (RR) and axillary temperature, and provides updated data every 2 min [3]. The Emergency physician is notified by E-mail and Iphone® (Apple) application of abnormal changes in patients' vital signs suggestive of patient deterioration (Fig. 1C and D). This application allowed early diagnosis of AF and intervention before the condition worsened in a 82-year-old Caucasian female. She had a past history of idiopathic paroxystic AF, treated with Bisoprolol 5 mg per day and Apixaban 2.5 mg twice per day. Clinical examination of this admitted patient to our ED revealed a 40.2 °C (104.4°F) temperature, tachypnea with respiratory rate (RR) = 23 bpm, heart rate (HR) = 90 bpm, blood pressure 127/79 mm Hg. A bacterial right lower lobe pneumonia was diagnosed. She was treated with systemic amoxicillin 1000 mg, three times per day. Pulse oximetry indicated an oxygen saturation levels between 90 and 92% SpO2. Arterial blood gas study found SaO2 91%, pO2 7.9 kPa, pCO2 4.4 kPa, pH 7.38. After initiation of oxygen therapy (2 l/min), RR was 18 bpm and SpO2 was 97%. We real-time monitored the patient in our medical unit for acute respiratory failure requiring oxygen, using Sensium® technology (Fig. 2) and the nurse checked vital signs manually every 8 h. During the night shift we received an alert by E-mail indicating a sudden increase of HR from 85 bpm to 141 bpm, on the 24 October 2017 at 05:30 pm (Fig. 3). Clinical examination found an acute cardiogenic pulmonary edema with abnormal left ventricular systolic function and arrhythmia. Vital parameters were RR = 32 bpm, SpO_2 92%, and blood pressure was 155/84 mm Hg. Electrocardiogram found an AF. Treatment consisted of increasing oxygen therapy 4 l/min, and to add systemic high-dose boluses of isosorbide dinitrate (2 mg three times) and furosemide 1 mg/kg [4]. No specific treatment of AF was given in this context of pneumonia. We received an alarm until 25 October 2017 at 04:56 am, and then we observed a decrease in HR (97 bpm). A second electrocardiogram found at this time a sinus rhythm. The patient had a temperature of 36.7 °C (98.1°F) and a RR of 24 bpm. During the AF phase, HR was 143 ± 7 bpm. During the sinus rhythm phase, HR was 82 ± 1 bpm. Blood culture revealed *Streptococcus Pneumoniæ*. Treatment improved clinical conditions and amended the respiratory failure in three days of treatment.

Community acquired pneumonia substantially increases the risk of heart failure across the age whether patients are treated in hospital or as outpatients, suggesting to assess downstream episodes of dyspnoea [5]. Usually, patients without vital distress are not monitored in an intensive or critical care unit after their visit in ED. However, these patients and especially the elderly can experience cardiac deterioration. If they are unable to call for help, they find themselves in life-threatening distress until the nurse arrives for scheduled surveillance. This situation can be life-threatening. The present case aimed to demonstrate how E-health might be helpful to early diagnose these situations. In the present case, the Sensium system was helpful to hypothesise the presence of AF in a context of pneumonia and to rapidly diagnose a cardiogenic pulmonary edema. The rapid treatment may have allowed the

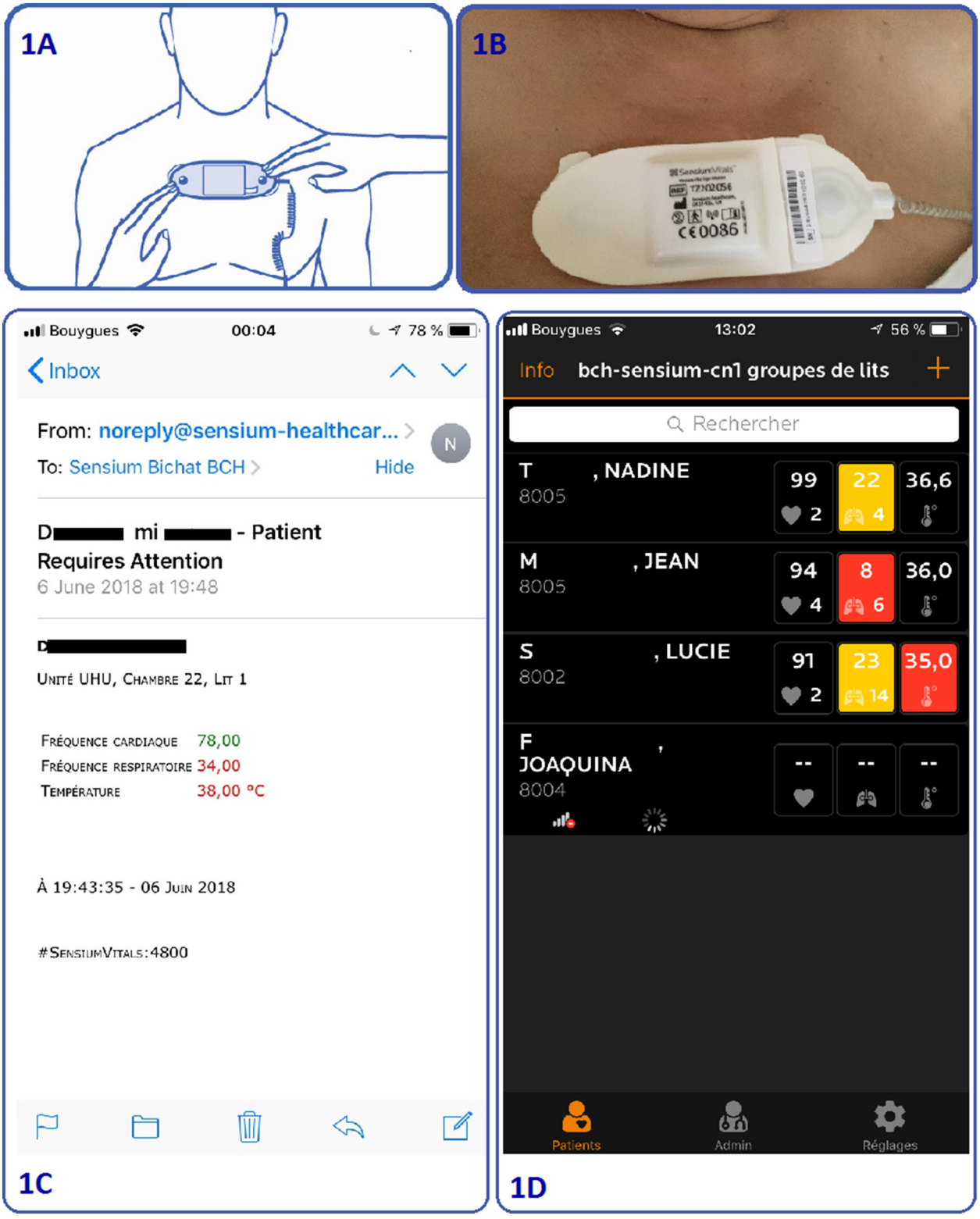

Fig. 1. Sensium® technology, a wireless system for monitoring vital signs of patients outside of high acuity areas. 1A: Sensium® patch 1B: Sensor worm on the patient chest 1C: Alert notification by E-mail 1D: Notifications to handheld device.

patient to avoid a life-threatening deterioration that could lead to cardiac arrest. E-health refers to health services and information delivered or enhanced through the Internet and related technologies [6]. E-health is used in many areas of medicine like psychiatry [7] and telemedicine [8]. The term telemedicine is used to describe different medical care concepts, provided across distance and time barriers [9]. Most mobile applications in telemedicine are developed to remotely manage a patient's disease [10-12]. This technology can also be useful within the hospital, especially for the monitoring of certain patients who could easily have a degradation of their acute pathology such as pulmonary or cardiac diseases. These new technology might be helpful to decrease adverse events and preventable deaths of EDs patients requiring oxygen

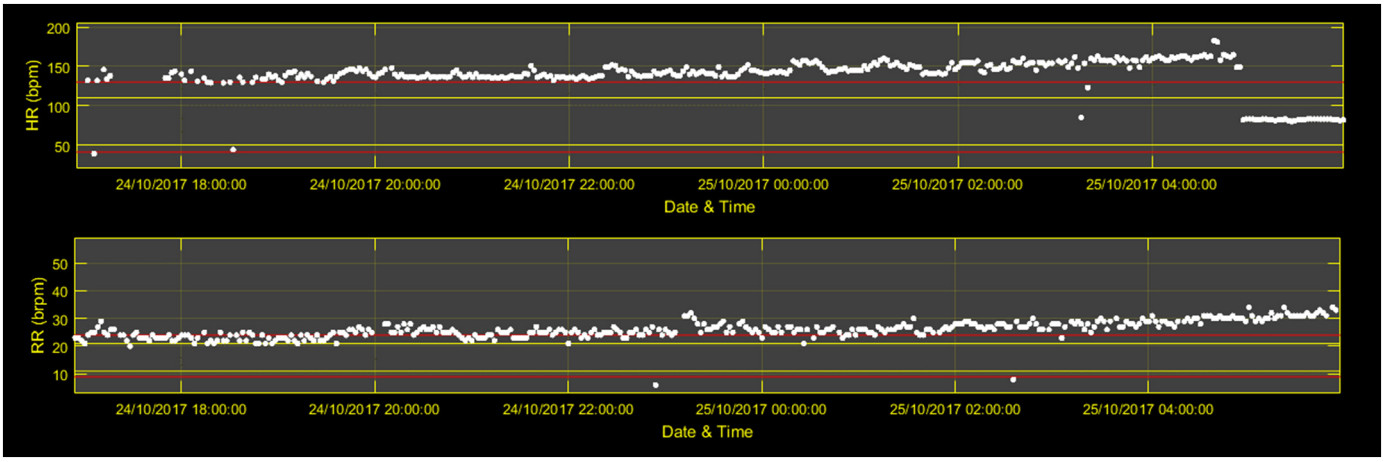

Fig. 2. 24 hour monitoring. HR: heart rate; RR: respiratory rate.

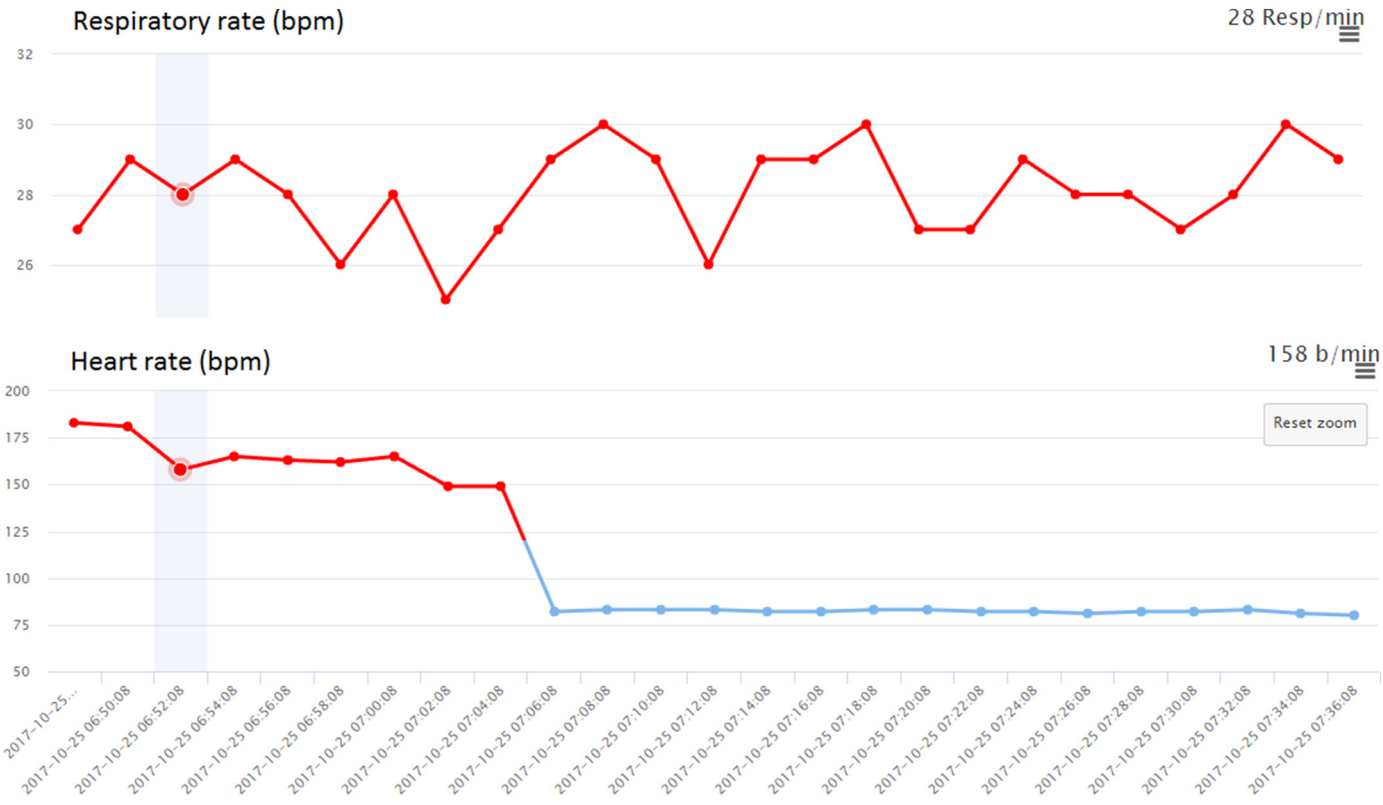

Fig. 3. Early diagnosis of atrial fibrillation using the Sensium® application HR: heart rate; RR: respiratory rate.

therapy and hospitalized outside intensive care units with monitored beds. The present clinical case is in the interest of showing the need to set up a prospective study on a larger population in order to determine the benefits of the use of this system and to determine the best indications for its use.

Abbreviations

AF	Atrial fibrillation
ED	Emergency Department
RR	respiratory rate
HR	heart rate

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Authors' contributions

- AG: Wrote and designed the manuscript,
- CC: Made corrections,
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The social media diagnosis of Superior Vena Cava Syndrome: A case report☆

Social media is becoming increasingly popular among the public. In 2017, Facebook had 2.2 Billion monthly active users [1]. Applications of social media in healthcare are growing. This includes utilization of social media in disaster preparedness, disease support forums, and research recruitment [2-5]. There has been limited research evaluating patients utilizing social media and crowdsourcing to aid in the diagnosis and treatment of their medical conditions [6]. Here, we report a case of a patient who turned to social media when she had recurrent syncope and facial swelling.

A 59-year-old female with a history of COPD, hypertension, and atrial fibrillation initially presented to the first Emergency Department (ED) with syncope and facial swelling. During her visit she had a normal workup which included a CT scan of the head and neck, chest X-ray, ECG, laboratories, urinalysis, and orthostatic vital signs. She was discharged with instructions to follow up with her primary care physician. She then had an outpatient carotid duplex and thyroid ultrasound which were normal.

She subsequently experienced two additional syncopal episodes which prompted her to visit a different ED. Again, her chest X-ray, ECG, and laboratories in the ED were unremarkable. She was then admitted to the hospital for further workup. During her admission she was seen by a cardiologist and a neurologist. Her inpatient workup included MRI of her brain, EEG, pulmonary function testing, bilateral upper extremity duplex, and formal tilt table test. All of her workup was normal except for her tilt table test. She was discharged with plans for a Holter monitor, an outpatient stress test, and home oxygen as she had experienced several episodes of hypoxia while in the hospital. She was discharged home with loop diuretics and steroids.

Her daughter, noticing her frustration, took it upon herself to turn to social media for answers. She published two pictures of her mother on Facebook. One of the pictures was more recent and one from the previous year. She then asked anyone if they could help figure out what was wrong with her mother. A family friend who is a pulmonologist replied and raised concern for Superior Vena Cava Syndrome (SVC).

The patient returned to the ED for the third time. She additionally complained of a sense of fullness in her head and stated that the steroids and diuretic had not improved her symptoms. She also mentioned the pulmonologist on Facebook raising concern for SVC. Suspecting SVC a contrast enhanced CT scan of her chest was obtained (Fig. 1) and showed a right hilar/paratracheal mass highly concerning for bronchogenic malignancy with encasement and vascular invasion involving the SVC and azygos vein. She was diagnosed with SVC and admitted. Mediastinoscopy with biopsy diagnosed small cell lung cancer. She then underwent chemotherapy and radiation therapy and as of this writing is in remission.

Social media utilization has become widespread. In Emergency Medicine, many academic professors have turned to social media to reach a larger audience. Also, residents and medical students have also started to use social media as a means of staying up to date on topics and current literature. This avenue has been coined “Free Open Access Medical education” (FOAM) and has become a prominent way medical education is both consumed and distributed [7]. The use of social media in healthcare has also become popular with 60% of state health departments now using at least one application [8]. With increased utilization in the medical and academic community, applications for clinical practice have started to emerge.

There has been limited research documenting the utilization of social media in the clinical realm. Mittal et al. reported on a case where they used social media to evaluate a patient's facial asymmetry. The patient had recent pictures on her Facebook page that allowed the neurologist to identify that her ptosis was new [9]. This represents an opportunity for physicians to potentially use their patients' social media profiles for a “last known normal” time when treating stroke symptoms.

There has been a paucity of literature that investigated the crowdsourcing of diagnosing medical conditions. One Danish study looked at a series of six uncomplicated cases posted to Facebook and found that the correct diagnosis was suggested in 5 of the 6 cases and was done so in less than 10 min [6]. Other small studies have looked at more complex diagnoses being made on sites specific for medical crowdsourcing, like CrowdMed, however the Danish study appears to stand alone with respect to using Facebook [6].

☆ Conflicts of interest: None.