Le presentazioni atipiche

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IRCCS-INRCA

- Paziente di sesso femminile, 75 anni
- Nefrite in età giovanile
- Cardiopatia ipertensiva da molti anni
- Episodio di ischemia cerebrale transitoria circa 10 anni addietro

- Insorgenza di stato confusionale acuto al proprio domicilio per cui viene condotta in Pronto Soccorso. Al momento della valutazione iniziale la sintomatologia si è già risolta e la paziente riferisce solo parestesie all’arto inferiore dx.

- In PS PA 140/80, FC 78, SaO2 98%
- Valutazione obiettiva generale sostanzialmente negativa
- Valutazione obiettiva neurologica sostanzialmente negativa
- TC encefalo: modesta ipodensità della sostanza bianca periventricolare, modesta atrofia, calcificazioni a carico dei sifoni carotidei e dell’arteria vertebrale dx
- La paziente viene ricoverata in Geriatria

- Il giorno successivo al ricovero comparsa improvvisa di dolore ed edema progressivamente ingravescente all’arto inferiore dx.
- Eco-color-doppler vascolare: trombosi della vena femorale comune estesa caudalmente fino alla vena poplitea

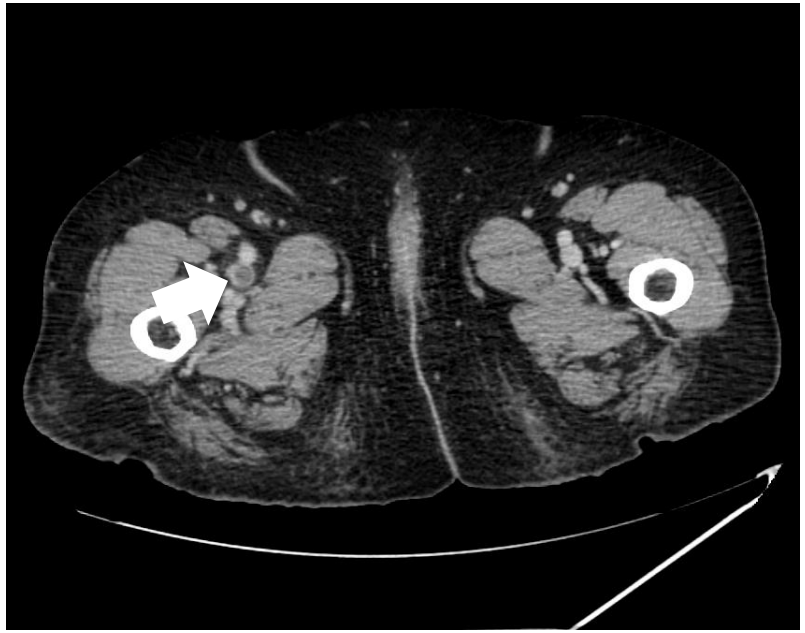
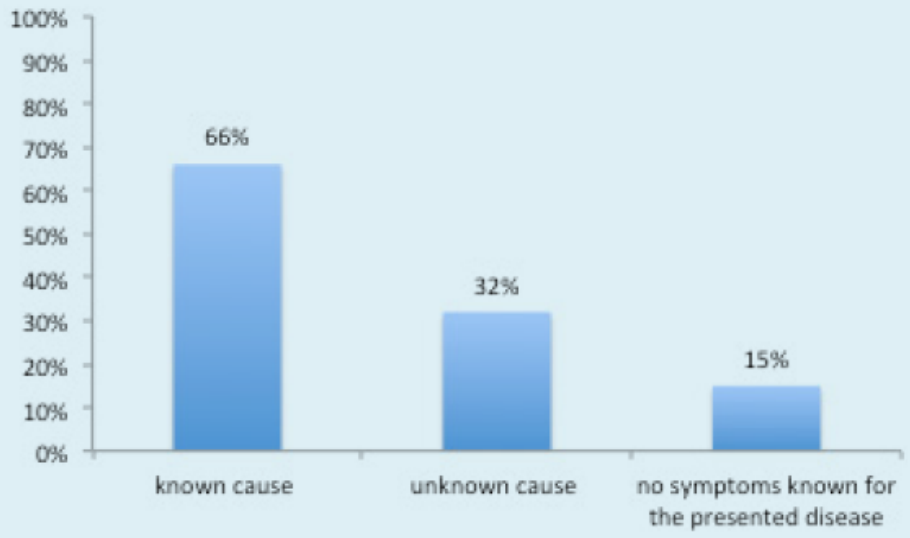


Table 1. *Baseline characteristics of patients*

Characteristic	All patients (n = 355)	Typical presentation (n = 167)	Atypical presentation (n = 188)	p-value
Age (years), mean (SD)	85.7 (4.3)	84.9 (3.4)	86.5 (4.8)	0.000
Gender, n (%)				0.06
Female	212 (60)	91 (55)	121 (64)	
Male	143 (40)	76 (46)	67 (36)	
Living situation, n (%)				0.005
Home	281 (80)	142 (86)	139 (74)	
Care institution[2]	72 (20)	23 (14)	49 (26)	
Missing	((2))			
Cognitive disorder[3], n (%))	106 (30)	35 (21)	71 (38)	0.001
Triage colour, n (%)				0.18
Orange/red[1]	50 (15)	29 (19)	21 (12)	
Yellow	160 (48)	69 (44)	91 (51)	
Green	126 (38)	58 (37)	68 (38)	
Charlson comorbidity index[4], median (IQR)	2 (1-3)	2 (1-3)	1 (1-3)	0.039
Admission diagnosis, n (%)				
Fracture	41 (12)	1 (1)	40 (21)	0.000
Gastrointestinal	36 (10)	30 (18)	6 (3)	
Malignancy	6 (2)	5 (3)	1 (1)	
Nephrogenic	4 (1)	3 (2)	1 (1)	
Pulmonary	11 (3)	10 (6)	1 (1)	
Neurological	52 (15)	20 (12)	32 (17)	
Cardiovascular	39 (11)	26 (16)	13 (7)	
Water and electrolytes	5 (1)	2 (1)	3 (2)	
Infectious	58 (16)	29 (17)	29 (15)	
Fall[5]	36 (10)	0 (0)	36 (19)	
Wound/ contusion	22 (6)	11 (7)	11 (6)	
Other[6]	45 (13)	30 (18)	15 (8)	
Communication problem, n(%)	101 (29)	27 (16)	74 (40)	0.000
Missing	((1))			
Amount of medication, mean (SD)	7.0 (3.9)	7.4 (3.8)	6.6 (3.9)	0.05
Missing	((7))			
Psychoactive medication, n(%)	84 (24)	36 (22)	48 (26)	0.403
Missing	((9))			

Figure 1. *Specification of atypical presentation of illness*



Atypicial presentation, n = 188 (53%)
Atypical presentation with known cause of geriatric syndrome, n = 125 (66%)
Atypical presentation with unknown cause of geriatric syndrome, n = 61 (32%)
None of the usual symptoms for the underlying disease, n = 29 (15%)

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Table 2. *Clinical outcome of elderly patients with and without atypical illness presentation*

Characteristics	All patients (n = 355)	Typical presentation (n = 167)	Atypical presentation (n = 188)	p-value
Admission duration ER (hours), mean (SD)	2.55 (1.4)	2.58 (1.6)	2.52 (1.2)	0.702
Duration hospitalisation (days), median(IQR)[1]	9 (4-15)	6 (2-12)	12 (5-17)	<0.01
Admission hospital, n (%)	233 (66)	111 (67)	122 (65)	0.755
Mortality in hospital, n (%)	23 (7)	11 (7)	12 (6)	0.938
Mortality at 1 year, n (%)	109 (31)	43 (26)	66 (35)	0.056
Discharge destination, care institution, n (%)	112 (32)	32 (19)	80 (43)	0.000
New discharge destination, care institution, n (%)[2]	54 (19)	14 (10)	40 (29)	0.000
New pressure ulcer, n (%)[1]	45 (20)	16 (15)	29 (25)	0.089
Missing	((13))			
Highest delirium observation score, median (IQR)[1]	2 (0-5)	1 (0-2)	3 (1-7)	<0.01
Missing	((26))			

[1]Only includes hospitalised patients
[2]Excluded patients already living in a care institution

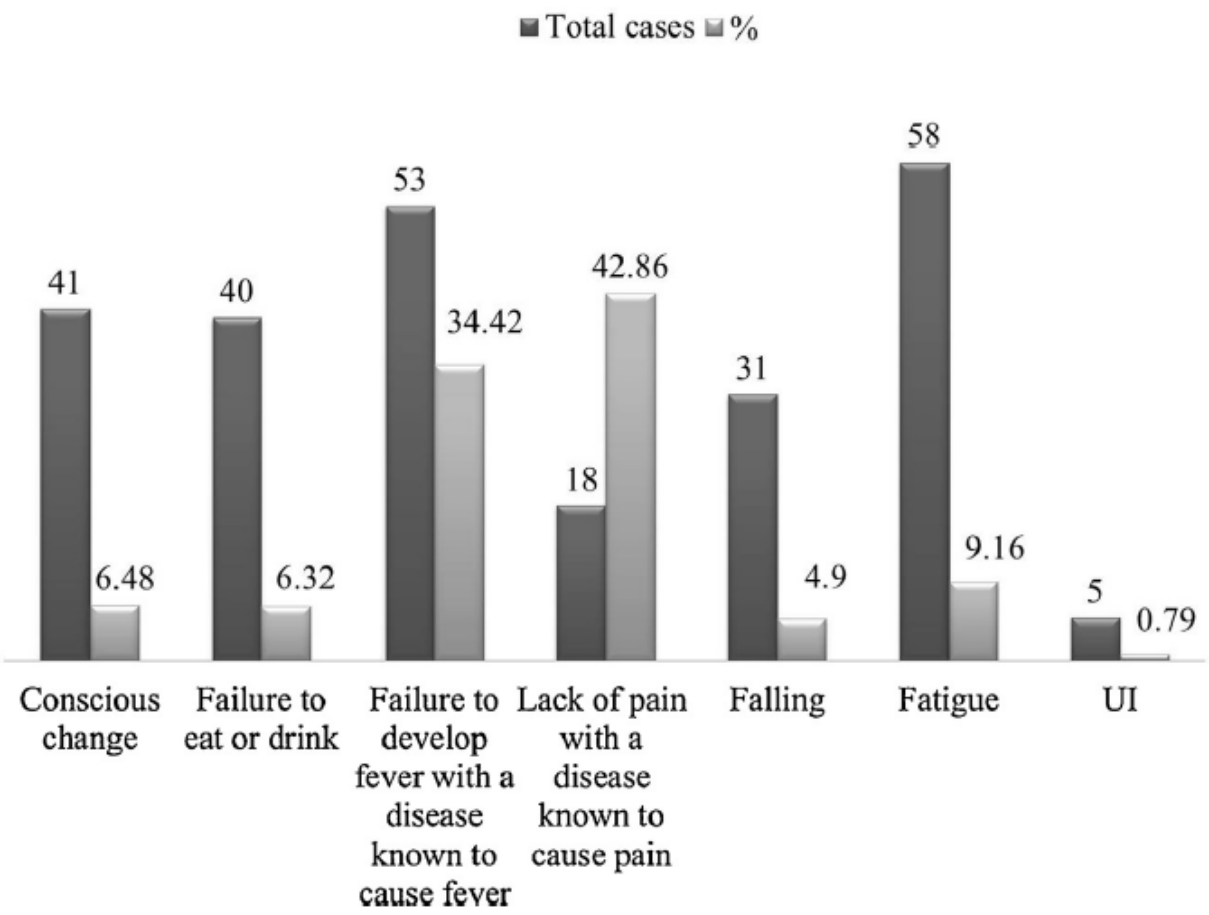

Fig. 1. Classic signs and symptoms found which are often parts of an atypical presentation of illness in older adults.
Note: Failure to develop fever with a disease known to cause fever included tuberculosis, infective endocarditis, lung abscess, pneumonia, urinary tract infection, septic shock, systemic infection, skin and soft tissue infection and acute abdominal condition e.g. acute appendicitis, Lack of pain with a disease known to cause pain included acute coronary syndrome, obstructive uropathy, acute abdominal condition e.g. acute appendicitis, liver abscess, UI; urinary incontinence.

An Approach to the Older Patient in the Emergency Department

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KEYWORDS

- Geriatric emergency department • Cognitive impairment • Atypical presentation
- Functional assessment • Geriatric medication reconciliation
- Emergency department palliative care

KEY POINTS

- Older adults are a rapidly growing, high-risk, unique emergency department (ED) patient population. ED provider perspectives and ED processes must evolve to better serve their complex care requirements.
- A more comprehensive approach to older ED patients requires routine, standardized assessment of cognitive impairment, atypical presentations, functional impairment, medication management, trauma, and end-of-life issues.
- A senior-friendly approach enhances patient safety, quality of care, and patient, caregiver and provider satisfaction.

Infections

- Serious acute infectious disease is both more common and deadly in older adults.
- 65% of ED patients diagnosed with sepsis are over 65 years old and septic shock has 30% to 50% higher mortality in older adults
- Immune senescence, medications, cognitive impairment, and preexisting conditions complicate rapid detection
- The classic findings of fever, respiratory or urinary tract symptoms, vital sign abnormalities, and increased white blood cell count are not reliably present

- Infectious source is not identified in one-third of the older patients
- UTI is difficult to diagnose accurately in the ED due to frequent absence of urinary symptoms
- Frail older adults with significant UTIs are more likely to present with delirium than urinary symptoms.
- The additional challenge in this setting is avoiding unnecessary use of antibiotics

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Infections

Table 3
Results of Multivariable Logistic Regression Modeling for Prediction of Fever, Altered Mental Status, and Urinary Tract Symptoms Among ED Patients Diagnosed as Having UTI, 2001–2008

	Fever			Altered Mental Status			Urinary Tract Symptoms		
Characteristics	Adjusted OR	95% CI	p-value	Adjusted OR	95% CI	p-value	Adjusted OR	95% CI	p-value
Age (yr)									
18–64 (adults)		Reference			Reference			Reference	
65–84 (older adults)	0.87	0.64–1.18	0.37	1.94	0.99–3.82	0.06	0.60	0.39–0.92	0.02
>85 (oldest adults)	0.74	0.52–1.03	0.08	2.49	1.25–4.95	0.009	0.48	0.31–0.75	0.001
Nursing home resident									
No		Reference			Reference			Reference	
Yes	1.63	1.18–2.25	0.003	4.79	2.92–7.83	<0.001	0.35	0.22–0.55	<0.001

Fever model controlled for age, nursing home residence, sex, race, MSA, and source of payment.
Altered mental status model controlled for age, nursing home residence, sex, race, ethnicity, and source of payment.
Urinary tract symptoms model controlled for age, nursing home residence, sex, race, ethnicity, region, MSA, and source of payment.
UTI = urinary tract infection.

doi: 10.1111/j.1553-2712.2012.01452.x

The most commonly used disease severity scores are inappropriate for risk stratification of older emergency department sepsis patients: an observational multi-centre study

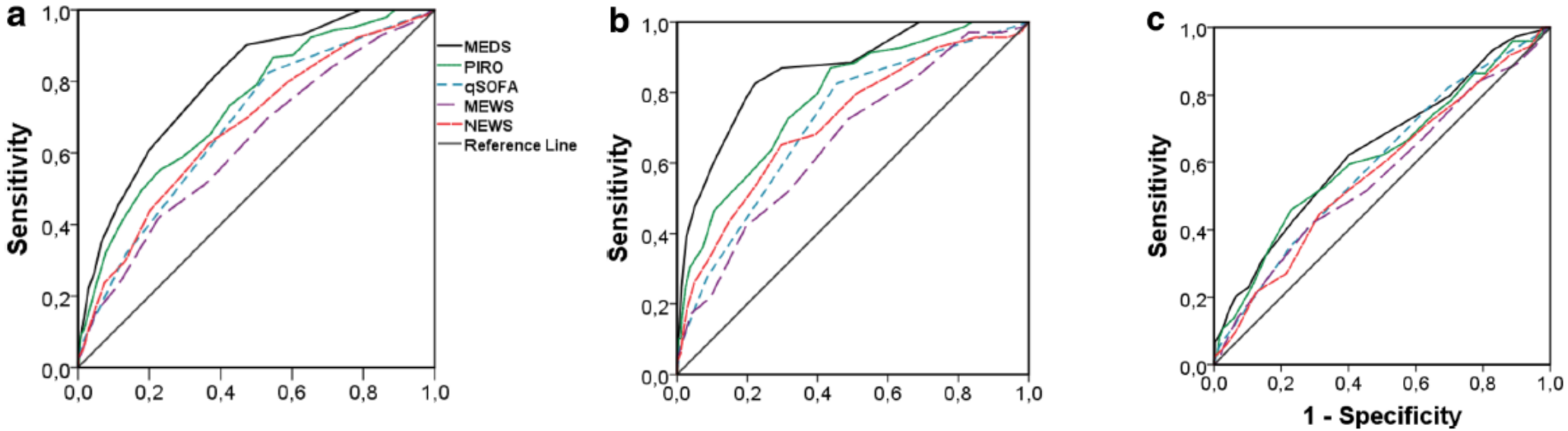


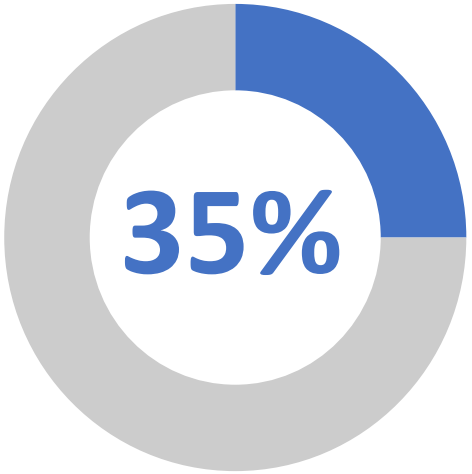
Fig. 3 Discriminative performance of five disease severity scores in the total cohort (**a**), patients <70 years (**b**), and patients >70 years (**c**)

Abbreviations: *qSOFA* quick sepsis-related organ dysfunction assessment score, *PIRO* predisposition, infection, response, and organ dysfunction score, *MEDS* mortality in emergency department sepsis score, *MEWS* modified early warning score, *NEWS* national early warning score, *AUC* Area under the curve, *PPV* Positive predictive value, *NPV* Negative predictive value

de Groot *et al. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* (2017) 25:91
DOI 10.1186/s13049-017-0436-3

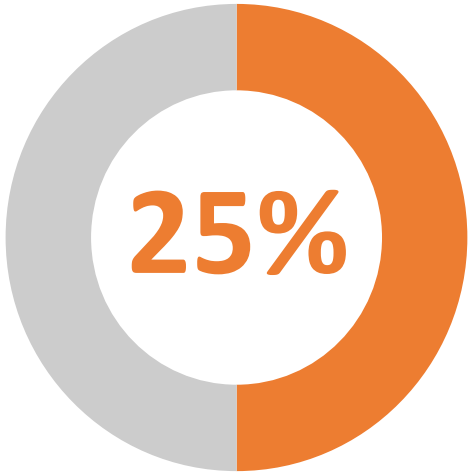
Abdominal pain

A conscientious approach to older adults with abdominal pain includes a high index of suspicion for severe disease, a broad differential, risk stratification based on severity of presentation and acute change from baseline, and consideration of factors conferring increased risk.



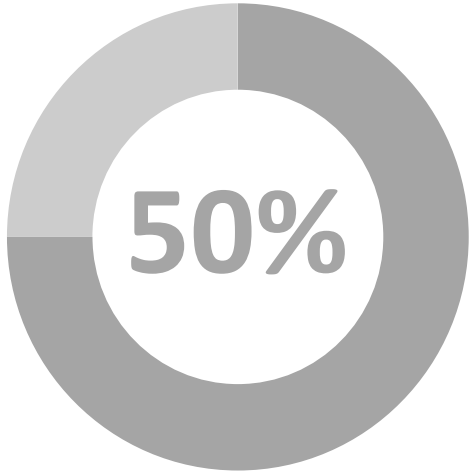
Peptic ulcer

Among patients over 60 years old with endoscopically proved peptic ulcer disease, 35% report no abdominal pain.



Appendicitis

Among older adults with appendicitis, 25% have no right lower quadrant pain.



Ruptured abdominal aortic aneurysm

Fewer than 50% of older patients with ruptured abdominal aortic aneurysm present with the classic combination of hypotension, abdominal pain, and palpable abdominal mass

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Table 3
Extra-abdominal causes of abdominal pain in the elderly

Cardiac	Myocardial infarction, pericarditis, heart failure
Pulmonary	Lower lobe pneumonia, pneumothorax, pulmonary embolism
Metabolic	Diabetic ketoacidosis, adrenal insufficiency, hypercalcemia, uremia
Infectious	Herpes zoster, cellulitis, urinary tract infections
Genitourinary	Prostatitis, neurogenic bladder, uterine prolapse
Medication	Narcotic withdrawal, iron overdose, antibiotics
Hematologic	Acute leukemia, rectus sheath hematoma (anticoagulated patients)

Emerg Med Clin N Am 34 (2016) 559–574
http://dx.doi.org/10.1016/j.emc.2016.04.008

Chest pain

- Symptoms are often unreliable with acute myocardial infarction; only 50% of patients 65 years old to 75 years old and 40% over 80 years old complain of chest pain.
- Instead, older adults present with shortness of breath (49%), diaphoresis (26%), nausea and vomiting (24%), syncope (19%), and delirium (5%).
- Diagnostic tests are insensitive and nonspecific due to chronic electrocardiogram abnormalities and nonischemic elevations of cardiac biomarkers.
- Other conditions in the chest pain differential also present atypically in older adults:
  - Pulmonary embolus, for example, is less likely to present with shortness of breath or pleuritic chest pain. Furthermore, the specificity of D-dimer drops significantly with age, to less than 5% over 80 years old.
  - Secondary spontaneous pneumothorax mimics symptoms of underlying chronic obstructive pulmonary disease (COPD), and rapid diagnosis with physical examination and radiography is complicated by chronic fibrous and bullous changes.

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Chest pain

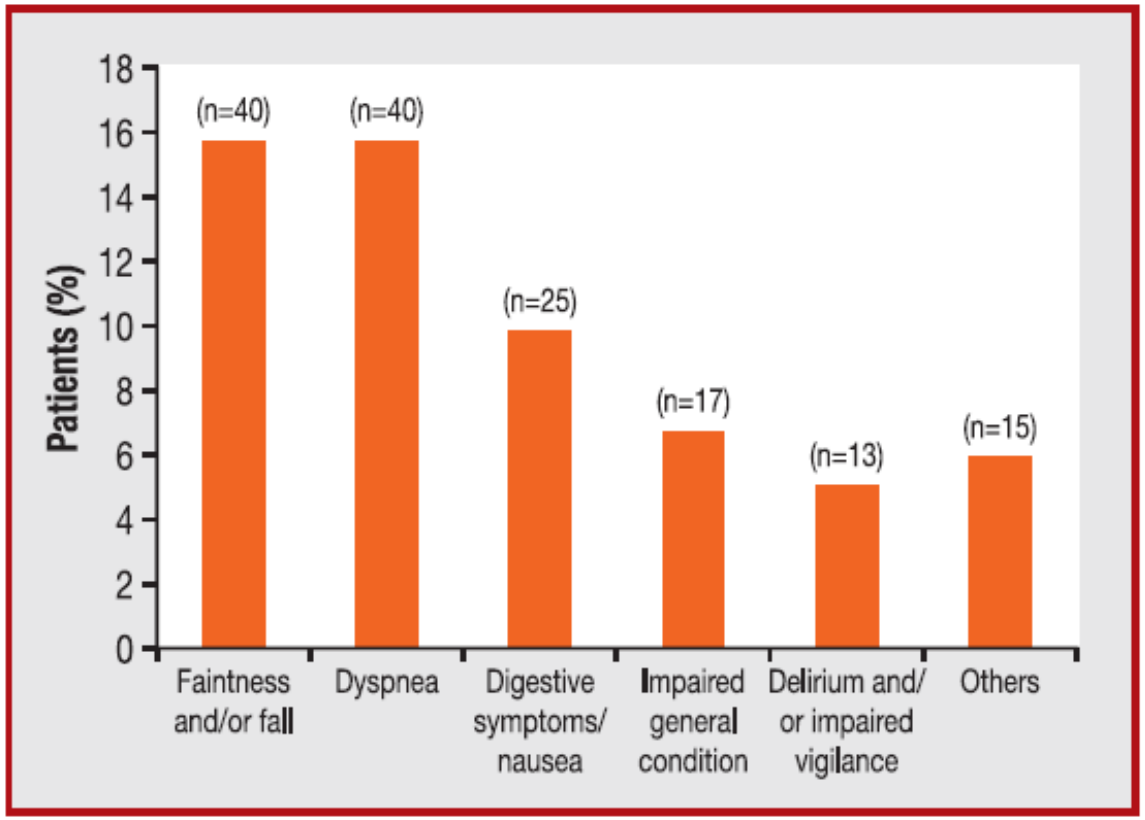

Figure 2. Atypical reasons for admission.

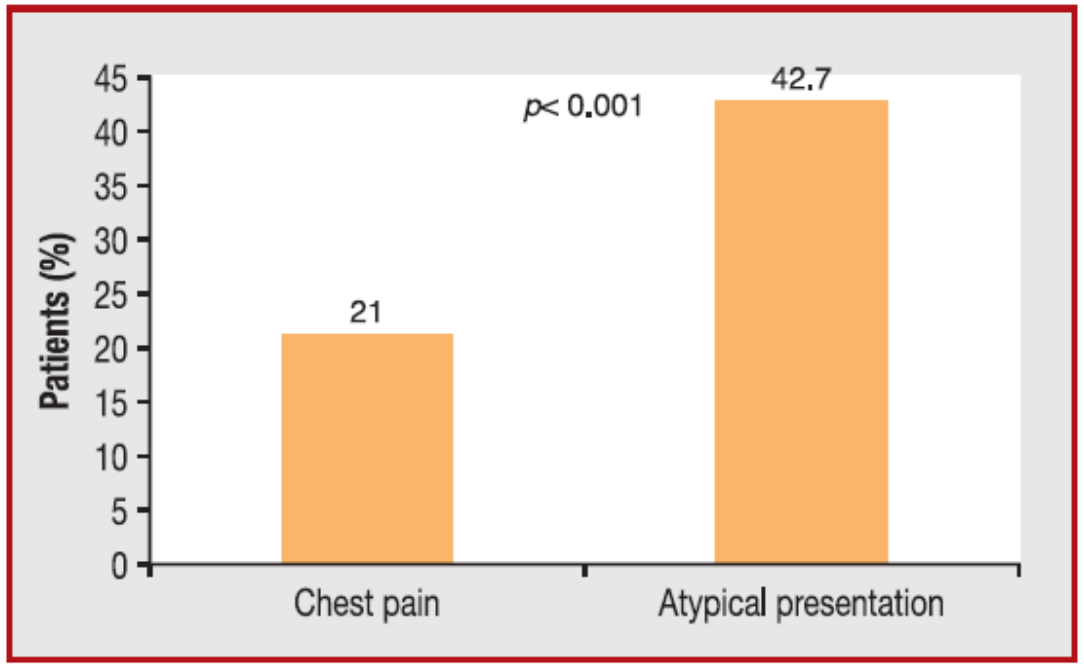

Figure 3. Mortality rate at 1 month according to clinical presentation.

Archives of Cardiovascular Disease (2013) **106**, 586–592

Prehospital Delay in Older Adults with Acute Myocardial Infarction: The ComprehenSIVe Evaluation of Risk Factors in Older Patients with Acute Myocardial Infarction Study

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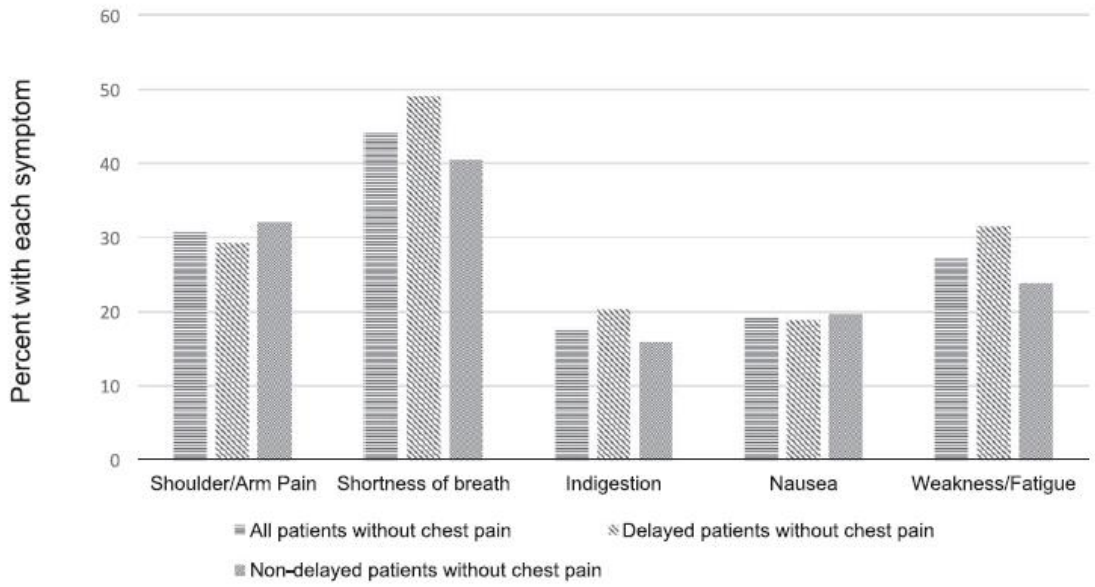

Figure 1. Common atypical symptoms in patients without chest pain.

Table 2. Association Between Predictors and Delay

Predictor	Unadjusted	Adjusted
	Odds Ratio (95% Confidence Interval) P-Value	
Age (continuous)	1.01 (0.99–1.02) .37	1.01 (0.99–1.02) .48
Female	1.08 (0.92–1.27) .32	0.96 (0.80–1.14) .64
Nonwhite	1.61 (1.25–2.08) <.001	1.54 (1.17–2.01) .002
Low income	0.99 (0.75–1.30) .91	0.96 (0.72–1.27) .77
Education <12 years	1.15 (0.98–1.36) .08	1.11 (0.94–1.32) .94
Atypical symptoms	1.43 (1.18–1.73) <.001	1.41 (1.15–1.72) .001
Diabetes mellitus	1.07 (0.91–1.26) .41	1.09 (0.91–1.30) .35
Heart failure	1.35 (1.11–1.66) .003	1.35 (1.09–1.68) .006
Prior acute myocardial infarction	0.93 (0.78–1.11) .43	0.87 (0.72–1.06) .17
Prehospital disability	1.00 (0.80–1.27) .97	0.92 (0.72–1.18) .51
Living alone	1.14 (0.97–1.34) .12	1.14 (0.95–1.36) .15
Low instrumental social support	0.99 (0.81–1.21) .91	0.98 (0.80–1.21) .88

JAGS 65:2391–2396, 2017

Conclusioni

- Older patients in the ED can be considered to represent a distinct population, one for whom the usual body-part and body-system approaches of emergency medicine do not produce a fulsome assessment.
- The usual 1 patient/1 problem approach frequently fails the clinician when faced with patients with several different active problems at the same time, including psychosocial and cognitive and functional problems, which have an impact on assessment and disposition.
- Acknowledge the principal domains of geriatric emergency medicine—cognitive impairment, atypical presentations of disease, functional assessment, medication management, trauma and falls, and end-of-life care.
- Having a standardized, organized way to think about those commonalities—an approach—will have a significant impact on both the quality of care a patient receives and efficiency of the EP's and department's work flow.

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https://doi.org/10.1016/j.cger.2018.03.001