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Author(s)	Law, Y; Chan, YC; Cheng, S
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Epidemiological Updates of Venous Thromboembolism in a Chinese population *Yuk LAW, YC Chan, Stephen CHENG*





Division of Vascular & Endovascular Surgery, Department of Surgery, The University of Hong Kong, Queen Mary Hospital, Hong Kong.



Disclosure

NO conflict of interest to report including

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

Introduction

- Venous thromboembolism (VTE) is a major contributor to global disease burden
- Hong Kong has population of 7 million
- Aim: epidemiological updates on deep vein thrombosis (DVT) and pulmonary embolism (PE) in a Chinese population in Hong Kong

Methods

- Study period: 2010 and 2011
- All patients with newly diagnosed DVT and PE
- Retrieved through the Clinical Data Analysis and Report System (CDARS)
- Outcomes:
 - Annual overall and age specific incidences
 - Annual overall and age specific mortalities
 - Annual postoperative incidences
- All calculation were averaged over the years 2010 and 2011

Number of patients with DVT



Male to Female ratio – 1:1.27

Number of patients with PE



Male to Female ratio – 1:1.15

Annual overall and age specific incidence

Per 100,000 population										
		Age group (years)								
	All ages	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
DVT	30.0	0.4	1.7	6.6	12.7	21.5	31.5	72.2	159.7	335.5
PE alone	8.7	0.2	0.7	1.5	2.9	6.2	12.4	22.6	53.0	60.2
PE with DVT	3.0	0.1	0.3	0.6	1.6	2.4	3.9	8.9	14.5	21.9

Annual overall and age specific 30-days mortality

Per 100,000 population										
(Percentage of incidence)										
			Age group (years)							
	All ages	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	≥85
DVT	2.7 (9.0)	0 (0)	0 (0)	0 (0)	0.4 (2.8)	1.6 (7.2)	2.8 (8.8)	6.2 (8.6)	16.8 (10.5)	41.9 (9.0)
PE alone	1.5 (17.4)	0 (0)	0.1 (7.7)	0 (3.0)	0.4 (15.4)	1.0 (16.9)	1.7 (14.0)	4.2 (18.6)	11.0 (20.7)	11.2 (18.5)
PE with DVT	0.4 (13.3)	0 (0)	0 (0)	0 (0)	0.2 (13.9)	0.3 (14.3)	0.7 (18.1)	0.5 (6.0)	2.0 (13.7)	4.4 (20.0)

Annual incidence of postoperative DVT and PE

	No. of	No. of	No. of	No. of
	operations	DVT	PE	PE with DVT
Cardiothoracic surgery	2957	3.0(0.10)	4.0(0.14)	0.5(0.02)
Dental	1391	0.5(0.04)	1(0.07)	0.5(0.04)
General surgery	34295	53(0.15)	31.5(0.09)	14(0.04)
Neurosurgery	2940	19(<mark>0.64</mark>)	14.5(<mark>0.49</mark>)	3.5(0.12)
Obstetrics and gynecology	12882	17(0.13)	5(0.03)	4(0.03)
Ophthalmology	16858	8(0.05)	1.5(0.01)	1(0.01)
Orthopedics	24436	91.5(0.37)	21.5(0.09)	15.5(0.06)
Urology	7264	11.5(0.16)	6.5(0.09)	2(0.03)
Overall	103023	203.5(0.20)	85.5(0.08)	40.5(0.04)

Compared to 10 years ago

Per 100,000 population	2000/2001*	2010/2011
DVT	17.1	30.0
PE	3.9	11.7

Possible causes:
1. ?? Genetics
2. Westernized diet
3.Better recognition

*Cheuk 2004

Incidence around the worlds

United state DVT 152 PE 121 Yusuf 2012

Tagalakis 2013 United state PE 112 Wiener 2012

Canada

DVT 78 PE 45 Norway VTE 148 Hald 2013 Denmark VTE 269 Holst 2010

Italy PE 189 Moretti 2010

Argentina DVT 130 PE 64 Tagalakis 2013 Korea DVT 5.3 PE 7.0 Jang 2011

Hong Kong DVT 30.0 PE 11.7 Taiwan VTE 15.9 Lee 2010

Australia PE 53 Shiraey 2013

Per 100,000 population

Conclusion

- Incidence of venous thromboembolism was still low compared to Caucasians
- Increasing trend over time
- Postoperative thromboembolic event was not common and hence routine pharmacological prophylaxis may not be worthwhile

