Blood Stasis Syndrome: Implication for Standardization of Pattern Identification

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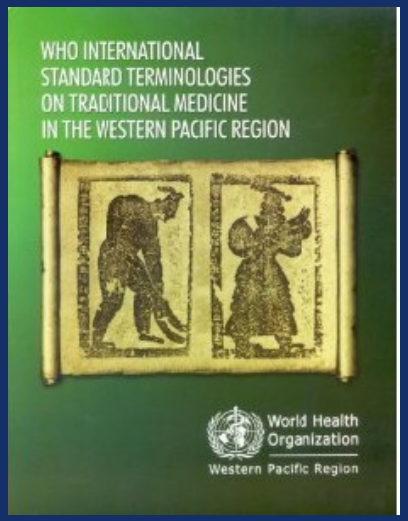
1. Pattern identification
2. Blood Stasis Syndrome
3. Recent research trend of Blood Stasis syndrome
4. Consideration
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Origin of Pattern Identification

- “Vertigo, spasm and convulsion due to endogenous wind indicating liver disorders, water retention and edema due to dampness indicating spleen disorders”

“诸风掉眩，皆屬于肝，诸湿肿满，皆屬于脾”

Quoted from “The Yellow Emperor's Classic of Medicine” (the Spring and Autumn Period and the Warring States Period (475-221 B.C.))



WHO. WHO international standard terminologies on traditional medicine in the Western Pacific region. WHO; 2007, pp: 13.



Blood-stasis Syndrome

Syndrome Eohyul



Yu Xue



Oketsu Syndrome

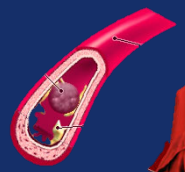


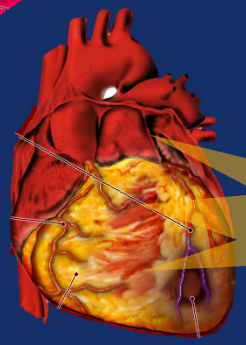
Essence of BSS

- According to a large number of basic and clinical researches, proposed the essence of BSS as follows:

BSS

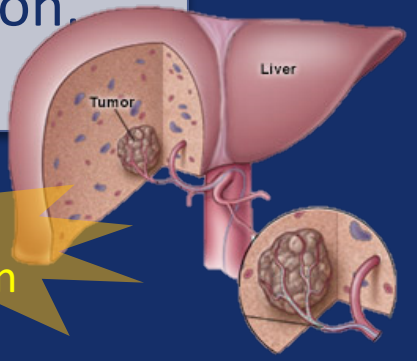
- Disturbance of blood circulation and microcirculation
- Changes of the physical and chemical property of blood
- Abnormal tissue hyperplasia, inflammation and immune dysfunction, etc.





Myocardial infarction Emergency D.

Cancer $153billion



Diagnostic Criteria for BSS

Years	Criteria	Institution or Author(s)
1982	Tentative diagnostic criteria for BSS	Chinese Association of Integrated Traditional and Western Medicine
1983	Quantified diagnostic criteria for BSS	Terasawa, et al
1986	Revised version of BSS diagnostic criteria in 1982	Chinese Association of Integrated Traditional and Western Medicine
1988	Reference criterion of BSS diagnosis	International Conference of BSS research
1988	Quantified diagnostic criteria for BSS	Jie Wang, Ke-ji Chen, China
1992	International criterion of BSS diagnosis (draft)	Ogawa, et al
2012	Diagnostic criteria for coronary heart disease patients with BSS	Shi Dazhuo, Keji Chen, et al C

None in Korea until 2013

In Korea, research have begun

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Original article

CORE-DITEC-BS (COnvergence REsearch of the DIagnostic TEChnology for Blood Stasis): Study protocol☆

Ju Ah Lee[a,1], Byoung-Kab Kang[a,1], Tae-Yong Park[b], Hoyoung Lee[a], Jong-In Kim[c], Seong-Uk Park[c], Jinho Lee[d], Byung-Cheul Shin[e], Jung-Han Lee[f], Sung-Se Son[g], Dong-Il Kim[h], Minho Cha[a], Kyung-Jin Yoon[a], Bongki Park[a], Sooseong You[a], Jeeyoun Jung[a], Mi Mi Ko[a], Jiae Choi[a], Tae-Young Choi[a], Eun Hyoung Shim[a], Ji Hee Jun[a], Myeong Soo Lee[a,*]

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Research period : 2013~2017
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Definitions of blood stasis

Organizing the concept of BS and setting the scope of research

Korean literature

- 6 Korean Database
  - 251 studies

OASIS RISS KoreaMed KISS

Clinical trials

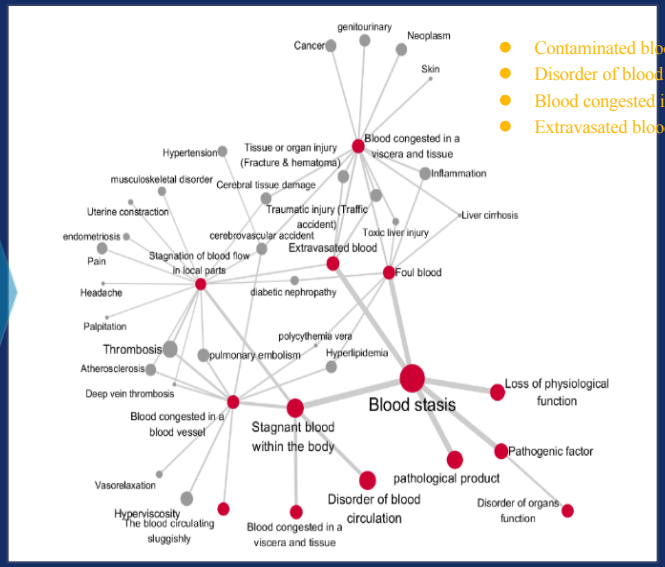
- PubMed Database
  - 92 studies

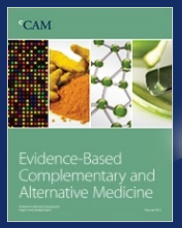
PubMed

CM, KM textbooks

- 17 textbooks









Perception of KMD

- 17,550 KMD (Web-based)
- 679KMD responded (3.9%)

CM Experts interview

- Eight well-known CM experts on blood stasis (2014)



✓ Blood stasis is defined as pathological product and pathogenic factors of blood stagnation of blood which lost the physiological function

Blood stasis	Main causes are contaminated blood, congested outside of blood vessel, and exstravasated blood
Diagnostic methods	Blood viscosity, blood vessel's contraction, tongue, pulse diagnosis



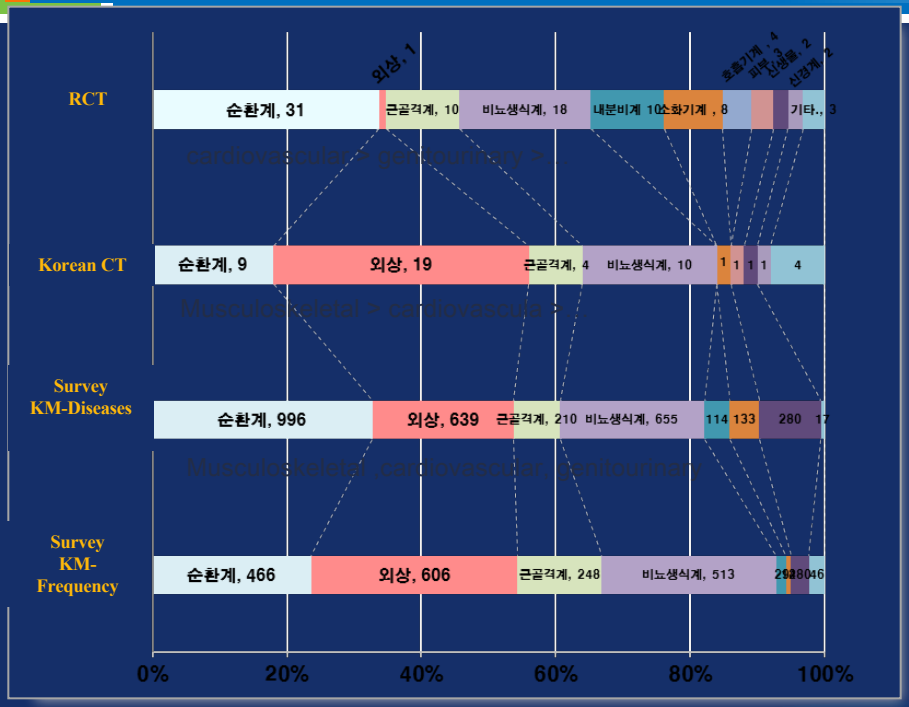


Blood stasis

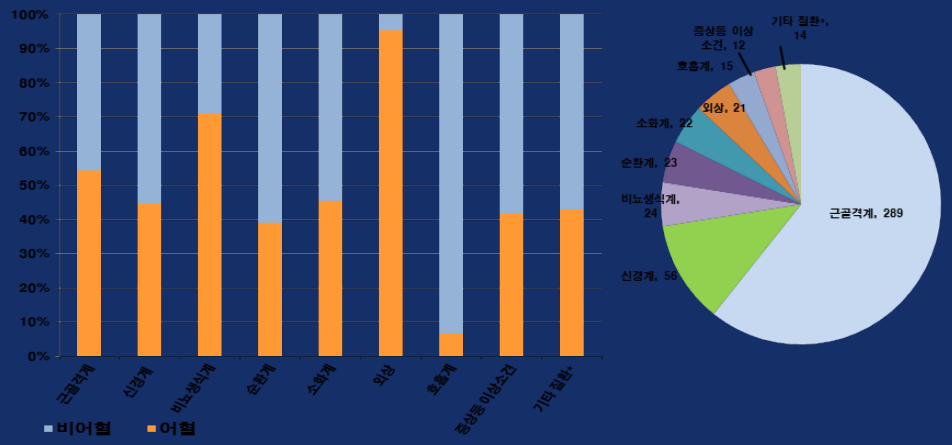
『pathological product and pathogenic factors of blood stagnation of blood which lost the physiological function including extravasated blood and the blood circulating sluggishly or blood congested in a viscus』

Related disease with BS

CORE_DITEC_BS research



- Clinical research results(2013)



- Clinical database for BS research
- period: 2013`
- center: Kyunghee (kangdong/ hoegui), Pusan, Wonkang, Jaseng, Cha
- patients : 476 case (BS: 250, non-BS:226)

Musculoskeletal, cardiovascular, genitourinary (gynecological) diseases are selected as target diseases

Musculoskelectal disease



Cardiovascular disease



Genitourinary



Validating BS diagnostic indicators

BMJ Open

Gyejibongneyong-hwan, a herbal medicine for the treatment of dysmenorrhoea with uterine fibroids: a protocol for a randomised controlled trial

Jeeyoun Jung,[1] Ju Ah Lee,[1] Mi Mi Ko,[1] Sooseong You,[1] Eunhee Lee,[2] Jiae Choi,[3]

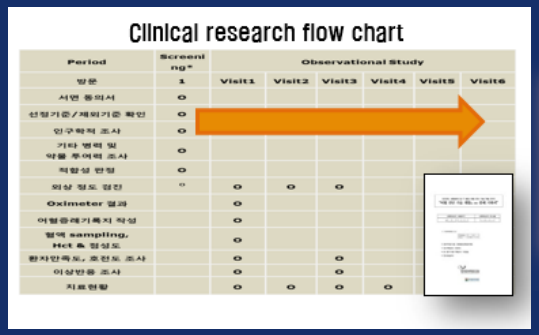
Table 1 Schedule for treatment and outcome measurements

Items		Screening	Treatment period Visit 1	Visit 2	Visit 3	Follow-up Visit 4	Visit 5
Participant agreement		•					
Blood sampling agreement		•					
Enrolment		•					
Demographic history		•					
Medical history		•					
Blood stasis screening		•					
Blood stasis questionnaire			•		•		•
Dysmenorrhoea	Numeric rating scale		•	•	•	•	•
	A shortened version of the McGill pain questionnaire		•	•	•	•	•
	Cox menstrual symptom scale		•	•	•	•	•
Physical examinations		•	•		•		
Clinical pathology examination		•	•		•		
Confirmation of inclusion and exclusion criteria		•	•				
Confirmation of medical history and history of changed treatments			•	•	•		
Randomisation			•				
Medication			•	•			
Adverse event				•	•	•	•
Ultrasonography		•			•		
Compliance check				•	•		

S, screening period; T, treatment period.

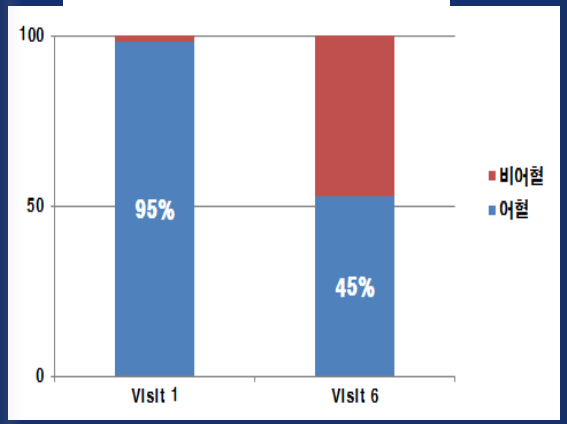
Validating BS diagnostic indicators

- Analysis of the changes in the diagnostic Index of Pain of CORE-DITECT-III before and after treatment

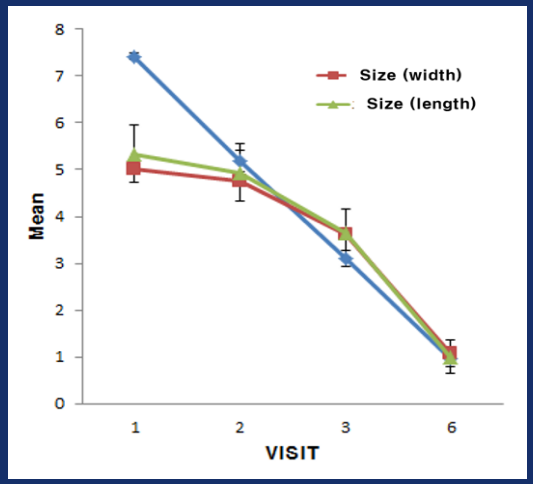


- Treatment reduce distribution of BS in clinical and biomarkers
- Patient satisfaction and improvement in health

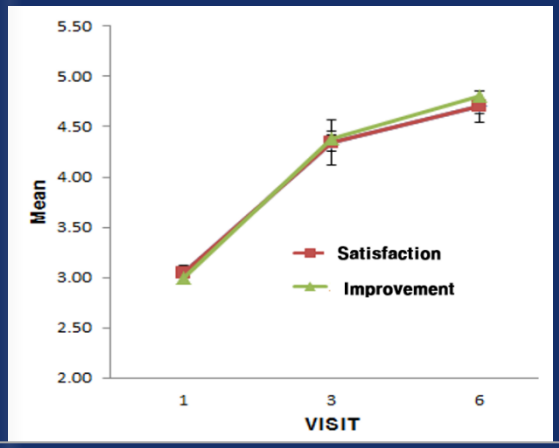
Distribution of BS



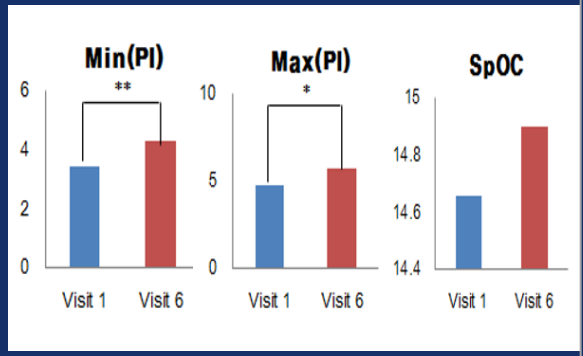
Severity of symptom



Patient Satisfaction and Improvement



Oximeter



Why Pattern Identification?

- Tailor the therapy for better outcome

  Classification approaches to tailor therapy in addition to biomedical disease diagnosis, and timely modify treatment based on the ongoing PI to improve therapeutic effect

- Innovation in medical science

  Scientific basis of KM pattern may lead to innovation in basic medical science, optimize clinical trial design by targeting the potential indication; find responsive subgroup of existing western drugs

"It is more important to know what person has the disease than what disease the person has."

Sir William Osler

Thank you