Does a single dose of intravenous dexamethasone reduce Symptoms in Emergency department patients with low Back pain and RADiculopathy (SEBRA)? A double-blind randomised controlled trial.

Balakrishnamoorthy R, Horgan I, Perez S, Steele MC, Keijzers GB

ABSTRACT
OBJECTIVE: To assess the effect of a single dose of intravenous dexamethasone in addition to routine treatment on visual analogue scale (VAS) pain scores at 24 h in emergency department (ED) patients with low back pain with radiculopathy (LBPR).

METHODS: Double-blind randomised controlled trial of 58 adult ED patients with LBPR, conducted in one tertiary and one urban ED. The intervention was 8 mg of intravenous dexamethasone (or placebo) in addition to current routine care. The primary outcome was the change in VAS pain scores between presentation and 24 h. Secondary outcomes included VAS pain scores at 6 weeks, ED length of stay (EDLOS), straight leg raise (SLR) angles and Oswestry functional scores.

RESULTS: Patients treated with dexamethasone had a 1.86 point (95% CI 0.31 to 3.42, p=0.019) greater reduction in VAS pain scores at 24 h than placebo (dexamethasone: -2.63 (95% CI -3.63 to -1.63) versus placebo: -0.77 (95% CI -2.04 to 0.51)). At 6 weeks, both groups had similar significant and sustained decrease in VAS scores compared with baseline. Patients receiving dexamethasone had a significantly shorter EDLOS (median: 3.5 h vs 18.8 h, p=0.049) and improved SLR angle at discharge (14.7°, p=0.040). There was no difference in functional scores.

CONCLUSIONS: In patients with LBPR, a single dose of intravenous dexamethasone in addition to routine management improved VAS pain scores at 24 h, but this effect was not statistically significant at 6 weeks. Dexamethasone may reduce EDLOS and can be considered as a safe adjunct to standard treatment.

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High-throughput real-time electrochemical monitoring of LAMP for pathogenic bacteria detection.
Safavieh M, Ahmed MU, Ng A, Zourob M.

ABSTRACT
One of the significant challenges in healthcare is the development of point-of-care (POC) diagnostics. POC diagnostics require low-cost devices that offer portability, simplicity in operation and the ability for high-throughput and quantitative analysis. Here, we present a novel roll-to-roll ribbon fluid-handling device for electrochemical real-time monitoring of nucleic acid (NA) amplification and bacteria detection. The device rendered loop-mediated isothermal amplification (LAMP) and real-time electrochemical detection based on the interaction between LAMP amplicon and the redox-reactive osmium complex. We have shown the detection of 30CFU/ml of Escherichia coli (in the range between 30 and 3×10(7)CFU/ml) and 200CFU/ml of Staphylococcus aureus (in the range of 200-2×10(5)CFU/ml) cultured samples in both real-time and endpoint detection. This device can be used for the detection of various Gram-negative and a number
of Gram-positive bacterial pathogens with high sensitivity and specificity in a high-throughput format. Using a roll-to-roll cassette approach, we could detect 12 samples in one assay. Since the LAMP and electrochemical analysis are implemented within sealed flexible biochips, time-consuming processing steps are not required and the risk of contamination is significantly reduced.

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Anantharajan N, Ravindranathan N.
Ear Nose Throat J. 2014 Sep;93(9):E4-6.

ABSTRACT
Primary branchiogenic carcinoma is a rare condition. In fact, most of the cases that were previously reported as such were actually cystic metastases of oropharyngeal carcinomas. We report a true case of primary branchial cleft cyst carcinoma. Our patient was a 42-year-old woman who presented with a painless fluctuant swelling in the right side of her neck. The lesion was completely excised, and pathology identified it as a squamous cell carcinoma in a branchial cleft cyst. Patients with this condition require a careful evaluation of the entire head and neck region, especially the oropharynx, to look for any cystic metastasis of the primary tumor.

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The effects of multimodal exercise on cognitive and physical functioning and brain-derived neurotrophic factor in older women: a randomised controlled trial.
Vaughan S, Wallis M, Polit D, Steele M, Shum D, Morris N.

ABSTRACT
OBJECTIVE: To test the effect of a 16-week multimodal exercise program on neurocognitive and physical functioning and brain-derived neurotrophic factor (BDNF).

DESIGN: A single-blinded, parallel-group randomised controlled trial.

SETTINGS: University campus and community-based halls.

SUBJECTS: Forty-nine women aged 65 to 75 years, with no cognitive impairment and not undertaking more than 1 h of formal exercise training per week.

METHODS: The intervention group attended a 60-min multimodal class twice each week which included cardiovascular, strength and motor fitness training. The primary outcome was neurocognitive functioning and secondary outcomes were physical functioning and plasma levels of BDNF.

RESULTS: Twenty-five participants were randomised to the intervention group and 24 to the control group. One control participant withdrew before follow-up data collection. The intervention group performed significantly better than the control group at follow-up (when controlled for baseline) in the Trail Making test A and B, the California Older Adult Stroop test (Word, Interference and Total scores), Controlled Oral Word Association test and the Timed Up-and-Go test, Six-Minute Walk test, One-Legged Stance test and plasma BDNF.

CONCLUSION: This multimodal exercise program resulted in neurocognitive and physical performance improvements and increased levels of plasma BDNF, in older women, when compared with controls. This RCT provides evidence that a multimodal exercise intervention can achieve larger effect sizes than those generally resulting from single modality interventions. Increases in BDNF levels imply neurogenesis may be a component of the mechanism underpinning the cognitive improvements associated with multimodal exercise.

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Respiratory symptoms of vendors in an open-air hawker center in Brunei Darussalam.
Nazurah Bt Abdul Wahid NN, Balalla NB, Koh D.
ABSTRACT

OBJECTIVES: We studied respiratory problems among vendors exposed to cooking fumes in an open-air hawker center. Exposure to cooking fumes from either the use of fossil fuels or liquefied petroleum gas (LPG) has been shown to be associated with adverse respiratory health effects.

METHODS: We conducted a cross-sectional study among 67 food vendors exposed to cooking fumes as well as 18 merchandise sellers at an open-air hawker center in Brunei Darussalam. Past medical and smoking history and exposure to cooking fumes were obtained. The validated American Thoracic Society Questionnaire with a translated Malay version was used to ask for respiratory symptoms.

RESULTS: Compared to merchandise sellers (n = 18), cooking vendors (n = 67) had a higher self-reported respiratory symptoms (50.7% for those cooking and 33.3% for merchandise sellers). Cough (28.3%) was the main respiratory symptom experienced in cooking vendors and breathlessness (22.2%) among merchandise sellers. Half (50.0%) of cooking vendors who worked for more than 10 years had cough and 27.3% had phlegm. Those cooking with charcoal were two times more likely to have cough than those cooking with LPG. Cooking vendors with a job duration of more than 10 years were thrice more likely to have cough.

CONCLUSION: Cooking vendors in the open-air hawker center exposed to cooking fumes had more respiratory symptoms compared to non-exposed merchandise sellers. The type of fuel used for cooking and duration of work was associated with increased prevalence of cough.

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The article is freely available at the PubMed Central or journal website at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4183101/

Role of occupational health in managing non-communicable diseases in Brunei Darussalam.

PG Ismail PK, Koh D.


ABSTRACT

Like most ASEAN countries, Brunei faces an epidemic of non-communicable diseases. To deal with health services (OHS) offered by its Ministry of Health, among others, provide screening and management of NCDs at various points of service. The OHS does not only issue fitness to work certificates, but is a significant partner in co-managing patients' health conditions, with the advantage of further management at the workplace. Holistic approach of NCD management in the occupational setting is strengthened with both employer and employee education and participation, targeting several approaches including risk management and advocating healthy lifestyles as part of a healthy workplace programme.

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The article is freely available at the PubMed Central or journal website at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4224701/

Gastric cancer in Brunei Darussalam: epidemiological trend over a 27 year period (1986-2012).

Chong VH, Telisinghe PU, Abdullah MS, Chong CF.


ABSTRACT

Background: Gastric cancer is the second most common gastrointestinal cancer and is more common in the East, compared to the West. This study assesses the trend of gastric cancers in Brunei Darussalam, a developing nation with a predominantly Malay population.

Materials and Methods: The cancer registry from 1986 to 2012 maintained by the Department of Pathology, the only State Laboratory at the RIPAS Hospital, Ministry of Health, was reviewed and data extracted for analyses. The age standardised rate (ASR) and age specific incidence rate were calculated based on the projected population. Cancers diagnosed below 45 years were categorised as young gastric cancer.

Results: Over the study period, there were a total of 551 cases of gastric cancer diagnosed. The most common type was adenocarcinoma (87.9%), followed by lymphoma (6.1%) and gastrointestinal stromal tumour (2.8%). The overall mean age at diagnosis was 61.9 years old (range 15 to 98) with an increasing trend observed, but this was not significant (ANOVA). There were differences in the
mean age at diagnosis for the different races (p=0.003 for trend), but not the gender (p=0.105). Young gastric cancer accounted for 14.9%, being more common in women, and in Expatriate and Malay populations compared to the Chinese. There was a decrease in the ASR, from 17.3/100,000 in 1986-1990 to 12.5/100,000 in 2006-2010. Chinese had a higher overall ASR (20.2/100,000) compared to the Malays (11.8/100,000). The age specific rates were comparable between men and women until the age group 55-59 years when the rates started to diverge, becoming higher in men. Chinese men had higher rates then Malay men whereas, the rates were higher or comparable between the women until the age group >70 when the rate for Chinese women overtook their Malay counterpart.

Conclusion: Our study showed that there is a declining trend in the incidence of gastric cancer and higher rates were observed in men and Chinese.

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Cancers of the young population in Brunei Darussalam.
Mohammad IA, Bujang MR, Telisinghe PU, Abdullah MS, Chong CF, Chong VH.

ABSTRACT
Background: Globally, the overall incidence of cancer is increasing as a result of ageing populations and changing lifestyles. Cancer is one of the leading causes of death, especially in the developed nations. Cancers affecting the young population are generally considered uncommon. This study assessed the demography and trends of cancers of the young in Brunei Darussalam, a small and developing Southeast Asia nation.
Materials and Methods: All patients diagnosed with cancers between 2000 and 2012 were identified from the cancer registry maintained by the State Histopathology Laboratory. Cancers of the young was defined as any cancers diagnosed under the age of 40 years. Demographic data and the type of cancers were collected and analysed using SPSS Statistics 17.0.
Results: Among the 6,460 patients diagnosed with cancer over the study period, 18.7% (n=1,205) were categorized as young with an overall decline in the proportion from 26.6% in 2000 to 18.8% in 2012 (p<0.001 for trend). Among all cancers of the young, the most common systems affected were gynecological (24.1%), hematological/lymphatic (15.8%), subcutaneous/dermatological/musculoskeletal (10.5%), breast (10.5%) and gastrointestinal (9.9%). Overall, among the different systems, neurological (54.9%) had the highest proportion of cancers of the young followed by gynecological/reproductive (30.6%), hematological/lymphatic (39.9%), endocrine (38.7%), subcutaneous/dermatological/musculoskeletal (22.3%) and the head and neck region (20.1%). There was a female predominance (66.9%) and the incidence was significantly higher among the Malays (20.1%) and expatriates (25.1%) groups compared to the Chinese (10.7%) and indigenous (16.8%) groups (p<0.001 for trend).
Conclusion: Cancers of the young (<40 years) accounted for almost a fifth of all cancers in Brunei Darussalam with certain organ systems more strongly affected. There was a female preponderance in all racial groups. Over the years, there has been a decline in the overall proportion of cancers of the young. Selective screening programs should nevertheless be considered.

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Profiles of Epstein-Barr virus associated gastric carcinomas in Brunei Darussalam.
Yen RL1, Telisinghe PU, Cunningham A, Abdullah MS, Chong CF, Chong VH.

ABSTRACT
Background: Gastric cancer is the second most
gastrointestinal cancer and is largely attributed to Helicobacter pylori (H. pylori) infection. In addition, studies have also shown association with Epstein-Barr virus (EBV) in 10% of gastric cancers. This study assessed the characteristics of EBV-associated gastric cancers (EBVaGC) in Brunei Darussalam.

**MATERIALS AND METHODS:** This study included gastric cancers diagnosed between 2008 and 2012, registered with the Department of Pathology RIPAS Hospital, Brunei Darussalam. Clinical case notes were systematically reviewed. Histology specimens were all stained for EBV and also assessed for intestinal metaplasia and H. pylori.

**RESULTS:** There were a total of 81 patients (54 male and 27 females) with a mean age of 65.8±14.8 years included in the study. Intestinal metaplasia and active H. pylori infection were detected in 40.7% and 30.9% respectively. A majority of the tumors were proximally located (55.6%), most poorly differentiated (well differentiated 16%, moderately differentiated 30.9% and poorly differentiated 53.1%) and the stages at diagnosis were; stage I (44.4%), stage II (23.5%), stage III (8.6%) and stage IV (23.5%). EBV positivity (EBVaGC) was seen in 30.9%. Between EBVaGC and EBV negative gastric cancers, there were no significant differences (age, gender, ethnic group, presence of intestinal metaplasia, tumor locations, stages of disease and degree of tumor differentiation).

**CONCLUSIONS:** This study showed that a third of gastric cancers in Brunei Darussalam were positive for EBV, higher than what have been reported in the literature. However, there were no significant differences between EBVaGC and EBV negative gastric cancers, there were no significant differences (age, gender, ethnic group, presence of Intestinal metaplasia, tumor locations, stages of disease and degree of tumor differentiation).

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**Mental healthcare in Brunei Darussalam: recent developments in mental health services and mental health law.**

Ho H.

**ABSTRACT**

Mental health services and legislation in Brunei Darussalam have undergone a period of development and reform. This paper describes the challenges met, recent innovations and priority areas for the next 10 years.

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**Psychiatric morbidity and socio-occupational dysfunction in residents of a drug rehabilitation centre: challenges of substance misuse management in a Bruneian context.**

Ho H, Adanan AM, Omar R.
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**ABSTRACT**

**Aims and method:** In 2011, a psychiatric clinic was started in Pusat Al-Islah, a drug rehabilitation centre. Our aim was to record self-reported socio-occupational dysfunction and patterns of drug misuse and to evaluate the usefulness of a psychiatric screening tool. A two-phased approach using the Self-Reporting Questionnaire (SRQ) and the Mini International Neuropsychiatric Interview (MINI) was used to examine the rates of psychiatric diagnoses.

**Results:** Methamphetamine was the most commonly misused substance in 94.5% of residents. High levels of socio-occupational dysfunction were reported. In total, 5.5% met criteria for major depressive disorder, 4.8% for lifetime psychotic disorder and 11.5% for suicidal ideation. In addition, 13.3% reported previous untreated mental health problems.

**Clinical implications:** A screening tool such as the SRQ can be used to identify those needing further psychiatric assessment. Interventions to address amphetamine misuse and associated socio-occupational dysfunction are required. Societal views and legislation influence the management of substance misuse problems in Brunei.

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